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Textile World

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Are We Afraid of Prosperity?

FROM several sources there has come to us word that "there is too much optimistic talk going around about textiles."

We sympathize with the thought that textile manufacturers should not be encouraged to speed up production unduly. We do not sympathize with the thought that they must be treated like children, for whom a little optimism is a dangerous toy.

As a matter of fact, the main threat hanging over the market at this time is not the tendency to over-produce. Mill men appear to have learned their lesson on this point, as may be noted from a study of cotton goods statistics for the first quarter, for example. Of course, the lesson may in time be forgotten; however, we believe it has been absorbed more than superficially.

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The principal trouble in the textile trade just now is the senseless price-attitude which seems to exist. Most observers are agreed on this.

Business may improve; inventories may shrink—but prices are still mentioned apologetically. We recently explained this as a "psychological hangover from years of depression." We know of no other explanation which would not be insulting.

If this is the cause, certainly a little more courage gained from news of favorable trade trends, if and when they develop, should not be entirely unwelcome.

We do not want false optimism. Everyone knows the textile industry is not highly prosperous in the sense that it is making a lot of money. However, everyone also knows that it has made real progress toward getting its house in order. We believe sincerely, as we stated last week, that in this sense the industry is going ahead faster than at any time in the last ten years. Failure to capitalize financially on this progress must be ascribed very largely to this inexplicable price-attitude.

As a matter of fact, the resentment over optimistic statements is in itself a reflection of the spirit of fear which is pervading the industry. Manufacturers seem to be afraid of prosperity—or, rather, of the potential effects of prosperity.

A little more courage—in naming prices, in holding to them, and in the way the industry faces developments generally—seems to be needed.

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Unfortunately, we must admit a sense of futility in editorializing on this subject. It is too intangible to permit definite recommendations. In dealing with most other problems, it is possible to indicate lines of action. But on the price question, we are dealing with a state of mind. After having pointed out the menace of price-cutting, the next step is obscure. Possibly, continued repetition of this thought will eventually develop greater sanity of action; to date, it has been ineffectual.

It is safe to say that, until such a new attitude is current, the textile industry, irrespective of its statistical position, will not be a profitable field of operation.

The immediate answer seems to be: Do not be afraid to recognize encouraging trends, but be sure those trends are reflected in a decision to secure a fair price.

The Week in Textiles

as Reflected in This Issue

General

Combating Corrosion

Selection of equipment which will resist the action of corrosive chemicals is an ever-present problem in the textile industry. Detailed information is presented which will aid in solving this problem. *(page 72)*

Efficiency Men

Although there are two things to criticize about many efficiency men, the species to which they belong is not dangerous. *(page 84)*

A Style Forecast

Paris decrees light colors and small patterns for mid-summer wear says Jeanne Ledoux whose forecast from the French capital is the feature this week of the TEXTILE WORLD Analyst. From the domestic market come reports that rough texture cottons are in the ascendency, that somber hues are best in men's wear woolens and that plain solid colors are leaders in the silk field. *(page 91)*

Anti-Trust Laws

It is now quite generally recognized that separate units in industry may, after discussion, take individual action to avert the folly of overproduction. In addition, however, positive agreements to this end, under proper conditions, may be legal, said Walker D. Hines at Taylor Society meeting. *(page 109)*

Cotton

Cason J. Callaway Heads A.C.M.A.

Cason J. Callaway was elected president of the American Cotton Manufacturers Association at the annual convention's business session last Saturday morning at Augusta, Ga. The convention concentrated on the cotton farmer, but one of its features was supplied at the banquet by Ward Thoron, president of N.A.C.M., who sprung a surprise attack on the industry's statistical work and night work elimination program. *(page 58)*

Farmer-Mill Relationship

The mutuality of interest between the cotton grower and the cotton manufacturer was stressed in speeches at the recent A.C.M.A. convention by B. E. Geer, retiring president, and George A. Sloan, president of The Cotton-Textile Institute. *(page 64)*

Future of American Cotton

Carl Williams, member of Federal Farm Board, brought an optimistic message to the convention of the A.C.M.A. when he characterized the outlook for American cotton as brighter than at any time in the last two years. *(page 67)*

Weaving Laundry Nets

Heavy looms and heavy steel-doup needles are necessary for weaving leno laundry nets. Suggestions for the successful manufacture of leno nets are offered. *(page 83)*

Cotton Yarns Lose Ground

There is a feeling of pessimism in sales cotton yarns, developed as result of a poor April. Deliveries and new business touched a low level for the year. Manufacturers are not taking shipments on old contracts. *(page 95)*

Print Cloth Outlook Cloudy

Notwithstanding a fine statistical position, print cloths are not acting as anticipated. They are declining at a pace more rapid than cotton weakness justifies and in view of a probable dull period ahead the future is being approached with some misgivings by a number of sellers. *(page 101)*

Wool

Wool Men Against Night Work

The directors of the Wool Institute last Wednesday voted to recommend elimination of night work for women and minors to the wool manufacturing industry and to take a ballot among all the mills on which practical application of the principal may be based. This is in line with the recent action of the cotton industry. *(page 75)*

Picker-Stick Breakage

A section of 24 woolen or worsted looms should not require on the average more than four new picker sticks per week. It is well to date all sticks as they are installed. *(page 79)*

Spinning Rabbit Wool

The spinning of Angora rabbit wool has been taken up by several woolen mills in Oregon and Washington. These plants are using their regular woolen preparatory machinery and spinning mules for the work with careful adjustments for the characteristics of the rabbit wool. *(page 82)*

Knitters Buy Worsted Yarns

Bathing-suit manufacturers have represented the main interest in sales worsted yarns heretofore. This week spinners have booked business from other knitters, selling being more general than at any time this year. *(page 97)*

Men's Wear Sells Well

Large advance sales of men's wear for fall and winter have surprised the trade. Buying was hoped for but not

The Textile Outlook

THE fact that buyer confidence is made or broken largely by the seller is one of the useful lessons to be learned today from conditions in various branches of the textile industry. The cotton goods industry has done much to break this intangible necessity to business by what appears to be hasty and needless price cutting. The wool goods industry has nurtured buyer confidence during the last few months and as a result is getting advance fall business in a volume which sellers had not dared let themselves hope for. Thus the textile see-saw swings up and down with the ultimate improvement largely dependent on general business. Raw material stocks appear burdensome but finished goods stocks generally are low, which may mean a normal state after all except that more material than usual is in manufactured form. . . . Cotton goods are weak and raw cotton close to December lows. Buyers are now taking in goods on old contracts at higher prices than current replacement. Wool goods trade is broadening and sellers are optimistic. Silks still suffer from over supply, both of goods and raws. Hosiery is steady. Heavy weight underwear has met a price cut. Outerwear is in good demand.

really expected in volume so early. Houses report good business in high and low price lines in staple and conservative patterns. *(page 101)*

Knitting

Full-Fashioned Trends

Interesting facts regarding the full-fashioned hosiery machines installed in 1930, with particular reference to gauge and sections per machine, are reported. *(page 80)*

Full-Fashioned Hosiery Defects

Improperly conditioned silk, sleazy knitting, and irregular delustering are causes for certain defects in submitted full-fashioned stockings. *(page 84)*

Hosiery Tone Easier

Steady firming of full-fashioned hosiery prices slackened, but producers continue confident. *(page 103)*

Underwear Prices Cut 7%

A 7% cut in fall underwear prices has slowed up buying in an already slow market. Spring lines active. *(page 103)*

Oversold on Swimsuits

Numerous bathing-suit producers are oversold, and prices show an upward trend. *(page 103)*

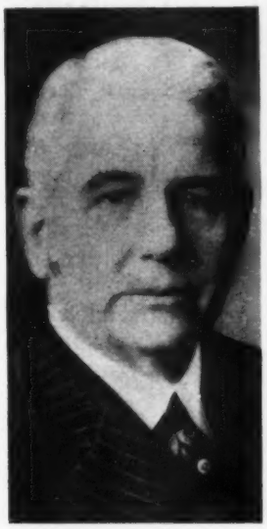
Silk

Silk Industry Survey

An extensive survey of conditions as they relate to sales and production in the silk industry has been initiated by officials of the Silk Association of America. *(page 75)*

Measuring Evenness

Studies on 9-meter sizings as a measurement of evenness indicate that the method is simple and accurate and that it eliminates the human equation in examining raw and thrown. *(page 76)*



One of the Encouraging Signs of the Times

Says C. R. Gray

"ONE of the encouraging signs of the times is the way the textile industry is coming forward," says C. R. Gray, president, Union Pacific System.

"Improved industrial relations, modernized production methods, controlled output, and scientific research, combined under intelligent leadership in carrying out a well-developed and far-seeing plan, are gradually restoring this basic industry to its rightful place."

Soft and Fuzzy Silk

True lousiness is a partial splitting of the ultimate raw-silk fiber or brin. Trouble resulting from lack of cohesion is sometimes mistaken for it. *(page 83)*

Raw Silk Prices Off 15-20c.

Raw silk prices dropped 15 to 20c. due to indifferent buying and reports Japan releasing bonded silk. *(page 99)*

Thrown Silk Active

Increased call from hosiery mills encourages throwsters, but prices are weak, due to raw silk decline. *(page 99)*

Spinners Offer Fall Yarns

Silk spinners are busy on fall lines and have written some orders, mostly for experimental purpose. Little spot business. *(page 99)*

White Shantungs Favored

Broadsilk mills estimate that 60% of current shantungs call is for white goods. Printed chiffons also moving. *(page 101)*

Rayon

Berlin Rayon Conference

At a Berlin, Germany, rayon conference representatives of German, Italian, Dutch, and Swiss producers have set up four committees to discuss conventions, sales, production and technicalities. Import quotas are being fixed and negotiations are continuing.

Filling Streaks in Crepe

Unevenness in tinting is a frequent cause of filling streaks in rayon crepe. *(page 84)*

Shaft Skips

Unsuitable adjustment of the chain cylinder, play in the cylinder, bad and wobbly pegs, and bent and binding indicator hooks are causes of shaft skips on double-index dobbies. *(page 84)*

Processing

Mercerizing Cotton Fabrics

A procedure is recommended for mercerizing light-weight cotton fabrics so that they may be finished to gray width. *(page 85)*

Hosiery Dyeing

A precaution to be taken in dyeing mercerized hosiery is to avoid over loading or under loading of the nets. Answers question: "How many dozen can be put in each net?" *(page 85)*

Synthetic Resins

Synthetic resins have been developed recently which are of interest to the textile industry for use in printing, waterproofing, etc. *(page 86)*

New Dyestuffs

Fastness properties and other characteristics of recently announced dyestuffs are given. *(page 87)*

The Business Outlook

THE persistently static condition of business contrasts with continued declines in commodity and security markets. Our index, at 78.8% of normal, still lingers around the levels of the beginning of the year, with slight fluctuations of no significance. The decline in steel activity seems to have slackened slightly this week, but the seasonal drop from March has been a bit sharper than usual, and prices continue to weaken. Building is not holding up well, but there is still some slight encouragement in the residential field. Carloadings, especially in merchandise and miscellaneous commodities, have made a better showing this week and support other indications of slightly quickened activity. But there is still no sign on the horizon of any large-scale action from any source sufficiently strong to offset the certainty of a stagnant summer. Federal Reserve pressure on short-term money rates seems to be correcting international exchange maladjustments, but it is doubtful whether a discount rate cut to the lowest levels on record will break the deadlock in long-term capital markets without vigorous direct action through large-scale security purchases by the Reserve banks.—*The Business Week.*

Unexpected Mixture of Farm Problem and Fireworks *At A.C.M.A. Convention*

IN THE "good old days" a reporter could write his account of a textile convention a week in advance. He had advance copies of the speeches; he knew who was going to be elected; and he could be morally sure that nothing would happen to alter the plans of the program committee. Nowadays, he still gets the addresses ahead of time; the slate of the nominating committee is still supplied to him prior to the sessions; but he is on guard for "fire-works."

The 35th annual convention of the American Cotton Manufacturers Association, held at the Bon Air-Vanderbilt Hotel, Augusta, Ga., April 24 and 25, lived up to this new order of things. Not until the last word had been spoken at the banquet, did the news of the meeting end. Any reporter who dismissed that feast as a social affair and trusted to his mimeographed copy of the address of the principal speaker, undoubtedly was called into conference with his editor the next morning.

At Augusta, the "fire-works" were supplied by Ward Thoron, president of the National Association of Cotton Manufacturers. Introduced as one of the honor guests at the banquet—and incidentally the only one encouraged or even permitted to make a speech—Mr. Thoron made the customary gesture for such an occasion by extending the greetings of the eastern association to the southern association, or as he expressed it "the greetings of old men to young men." He went further, as is also often customary, and made a forceful plea for more intelligent price action on the part of manufacturers.

At this point, a study of the archives of TEXTILE WORLD reveals, the honor guest renews his assurance of hearty cooperation and support, and sits down amid applause. But Mr. Thoron did not sit down. Instead, he launched a vigorous attack upon the development and publication of statistics by the industry, and upon the movement to eliminate night employment of women and minors in cotton mills. The latter he characterized as "perfect hypocrisy." He even mentioned one of the proponents of the movement by name and stated that since the manufacturer in question works his mills day and night with men, he (Mr. Thoron) did not consider him either serious or fair.

President B. E. Geer, acting as toastmaster, was faced with a situation which could hardly have been anticipated by the program committee. He met it by saying: "I may look stupid but I've got too much sense to get into a controversy with Ward Thoron. All I'm going to say to him is this: When he speaks to the American Cotton Manufacturers Association, he's in a friendly atmosphere." That, apparently, was that.

However, after the address of the speaker of the evening, Chairman James C. Stone of the Federal Farm Board, Mr. Geer recognized George A. Sloan, president of The Cotton-Textile Institute, who stated that he had felt the industry had conclusively settled the question of night employment of women and minors, and remarked that of the 85% who had subscribed to the policy of its elimination, 96% had already put it into effect. He then asked all who believed that women and minors should work at night to rise. The unofficial estimates of those who stood up vary from two to three.

Once more the banquet was apparently at an end. However, Mr. Thoron made his second talk of the evening and stated that he did not believe Mr. Sloan's question was put fairly—nor that it was the product of a great mind. What we are after, he said, is curtailment, but getting curtailment by preventing women and minors from working at night is fraud. Let us be frank, he urged, and not be hypocrites.

At this point, it looked as if this sort of thing might go on all night. However, W. M. McLaurine, secretary of the association, decided otherwise. In one of the most vigorously applauded speeches of the convention, he requested all those who desired to have their railroad certificates validated, to see the representative in the morning. If Mr. McLaurine had not already acquired a reputation for efficiency, he would have gained it through those few words.

Officers Elected at Business Session

CASON J. CALLAWAY, La Grange, Ga., one of the industry's outstanding younger executives, was elected president of the association in the executive business session Saturday morning. Other officers were named, as follows: B. B. Gossett, Charlotte, N. C., first vice-president; Donald Comer, Birmingham, Ala., second vice-president; and W. M. McLaurine, of Charlotte, secretary and treasurer (re-elected).

Harry L. Williams, Columbus, Ga., and Allen Little, Alabama City, Ala., were new members of the board of government elected at this time, while the following were named for additional terms: William D. Anderson, Macon, Ga.; A. M. Fairley, Laurinburg, N. C.; Robert Lassiter, Charlotte; and G. M. Wright, Great Falls, S. C.

Several important resolutions were adopted in the executive business session. The first of these requested

WHAT HAPPENED AT AUGUSTA CONVENTION

Cason J. Callaway elected president of American Cotton Manufacturers Association; B. B. Gossett first vice-president, and Donald Comer second vice-president • Meeting devoted largely to consideration of farm problem, and relationship between cotton grower and cotton manufacturer • Federal Farm Board policies explained by Chairman James C. Stone; excellent impression made by his remarks • Ward Thoron, president of National Association of Cotton Manufacturers, electrified banquet by his attack on movement to eliminate night employment of women and minors; George Sloan responded for The Cotton-Textile Institute • B. E. Geer, retiring president of A.C.M.A., recommended appointment of committee to consider possibility of uniformity in mill operations in States covered by Association.

members to urge representatives of southern railroads to agree upon a schedule of freight rates, known as the Taylor Schedule, which is mutually satisfactory to New England and southern mills and "which will permit the operation of the mills of both sections on a competitive basis, and without the imposition of the burden of a large increase in rates." A supplementary resolution approved the Taylor Schedule in behalf of the association and its members and urged southern railroads to stand by their customers, the southern mills, in this emergency.

The creation of a national committee of the American Cotton Manufacturers Association was authorized by an amendment to the by-laws of the association, which was incorporated in the third resolution adopted in the business meeting, and it was stated simultaneously that the functions of The Cotton-Textile Institute now cover all matters of a legislative nature that were formerly handled by the National Council of American Cotton Manufacturers. The newly created national committee will act for the association in national legislation and other matters of national scope and importance, cooperating when necessary and advisable with a similar body from the National Association of Cotton Manufacturers, or with other textile organizations, and will consist of seven members, as follows: the president, the two vice-presidents, chairman of the legislative committee, and three other members elected from the active membership of the association.

The three members of the national committee elected in the business session were, as follows: T. M. Marchant, Greenville, S. C., for one-year term; William D. Anderson, Macon, Ga., for two-year term; and Stuart W. Cramer, Cramerton, N. C., for three-year term.

Contending that the manufacturers' associations have not had equal representation with the shippers' association at various conferences held by the U. S. Department of Agriculture with reference to grade and staple of cotton, the next resolution adopted petitioned that department of the government to correct this inequality by allowing the manufacturers an equal representation at future conferences. Furthermore, a supplementary resolution authorized the cotton committee to set up private types of staple standards, in the event that the Bureau of Agricultural Economics does not take action in the matter of official staple standards, and that a plan for setting up private types be used by members of the association on staple lengths of $\frac{3}{4}$-in., $\frac{13}{16}$-in., $\frac{7}{8}$-in., $\frac{29}{32}$-in., $\frac{15}{16}$-in., $\frac{31}{32}$-in., 1-in., $1\frac{1}{32}$-in. and $1\frac{1}{16}$-in. cotton.

Cason J. Callaway, elected president of A.C.M.A.

Following the approval of this recommendation, the customary resolutions of appreciation and condolence were adopted. In addition, a special resolution was passed extending a message of sympathy to the family and organization of the late H. R. Fitzgerald, of Danville, Va., a past-president of the association.

President Geer's Annual Address

WARM praise for the work being done by The Cotton-Textile Institute; reference to the tax study undertaken by the A.C.M.A.; a recommendation that a committee be appointed to investigate the possibility of greater uniformity in operation of textile mills in the states embraced by the Association; and a glowing tribute to the late H. R. Fitzgerald, were features of the annual address of the president, presented by B. E. Geer at the opening session. His address, with the exception of

the section on the farm problem which appears elsewhere in this issue, follows in large part:

I would be remiss if, as your president, I did not take this occasion to speak in commendation of the great service rendered our whole industry by The Cotton-Textile Institute under the able leadership of Mr. Hines and Mr. Sloan. It is to be doubted whether our business could have survived these trying days without the guidance and support of the Institute. The outstanding accomplishments of the year have been (1) the successful promotion of the movement that has resulted in the elimination of women and minors from the night run of approximately four-fifths in number of the active spindles of this country, and (2) the dissemination of dependable information based upon which the mills in different groups have adopted a schedule of operation aimed at balancing production and consumption. More and more the work and influence of the Institute are justifying its existence. I wish I could say the word that would lay this thought squarely upon the mind and conscience of every member of this association who holds a position of responsibility.

The great problem before the Institute from its inception was, and is now, to transform individualists into cooperative beings. It was not an accident or purposeless act when men in the industry conceived, and gave form and substance to the Institute. While it may have been a partially submerged idea at the time, the truth is that thoughtful men in the industry were having forced upon them the already belated conclusion that unrelated effort was precipitating the industry down the road that leads to disaster and failure. And so the Institute has "come to the Kingdom for such a time as this."

"More and more the work and influence of The Cotton-Textile Institute are justifying its influence. I wish I could say the word that would lay this thought squarely upon the mind and conscience of every member of this association who holds a position of responsibility."—*B. E. Geer.*

In the beginning the task before Mr. Hines was not an easy one. Previous to the expansion of the industry that came with the World War there was no compelling reason for cooperative effort on the part of mill executives. But the period of deflation immediately following the War, and these recent years when men and industry have been taught in a powerful way that there is no escape from the penalties of a great world conflict and no such thing as disregard of world conditions, new and insistent reasons requiring cooperation have come into being and it is this lesson—*need for cooperation and collective action*—that has been the great and outstanding contribution of the Institute to our industry.

Whether we see in the machine age ultimate good or ultimate evil, the machine age is with us. Labor saving devices are no less a pressure on the manufacturer than on the worker. Adjustment required by the one is as real and as peremptory in its demands as in the other. In times still remembered by some of you, economic problems were studies within the confines of one section of our common country. Today world markets act and react upon one another with a rapidity that confounds us. In this new and puzzling situation we are yet groping. It is vital to the industry that we have a clearing house for our best thought. I say again that The Cotton-Textile Institute has "come into the Kingdom for such a time as this." For us I believe the Institute, generously supported, is and will be our pillar of cloud by day and our pillar of fire by night.

Cotton Mill Taxes: During the year a study of taxes in all the principal textile States has been made under the direction of the officers with interesting, informing results.

This study seems to justify the following conclusions:

1. During the last ten years there has been a substantial reduction in the taxes paid per unit of machinery in New England textile mills. This reduction has been especially marked during the last five years and the tendency is still downward as shown by the figures covering 1930 taxes.

2. Many mills in the South are now paying substantially higher taxes than their competitors in New England.

3. In those southern States where the largest textile development has taken place there has been a heavy increase in the tax burden per spindle since 1922. In the case of South Carolina the increase has been from an average of 55c. per spindle in 1922 to an average of 78c. per spindle in 1930. In North Carolina the heavy burden came with the year 1923 and the average tax per spindle today stands at approximately 71c.

As compared with the South Carolina rate of 78c. and the North Carolina rate of 71c., a New Bedford authority on taxes was recently quoted as saying that for 1930 the average rate of taxes paid by New Bedford mills per spindle was 52.15c. and by Fall River mills 43.96c. It will be noted that the highest of these two eastern rates is 33% below the rate in South Carolina for the same year.

A recommendation: One of the serious obstacles in the way of adoption, either through voluntary action or by means of desirable legislation of needed changes affecting hours of labor and working conditions in the South is the wide variance in the laws governing the operation of textile mills in the States embraced by our association. I believe the time has come when a careful comparative study should be made of the textile laws in the various southern States and that we should exert ourselves vigorously toward the adoption, either by voluntary action, or through legislation, of sound and uniform operating practices in these States.

To this end I recommend that the incoming president of your association be authorized and requested to appoint a committee, the size of the committee to be determined by him, whose duty it will be to study this subject with the view of suggesting the necessary steps to be taken to secure greater uniformity in the operation of textile mills within the bounds of our association.

H. R. Fitzgerald: Since we last met one of our most beloved associates and a recent president of this association has passed on. Harrison Robertson Fitzgerald was our Greatheart—a man whom we all respected and loved for his exceptional and fine qualities of mind and heart. No man among us was more devoted to the purposes and ideals of this association and none labored more assiduously for their accomplishments. In every effort put forth for the advancement of the welfare of the whole industry, North and South, he carried his full responsibility and gave unsparingly of his time and thought. His voice was always on the side of sound, constructive and progressive policies. His place as a student of our problems and as a counselor in times that call for great decisions will be hard to fill.

In conclusion I must express my obligation to our efficient secretary, Mr. McLaurine. In every way he has met the strictest requirements of his office. His alert mind and ready hand have anticipated and faithfully done many "unremembered acts of kindness" which otherwise would have added to my day's work. And for the patience and forbearance and cooperation of the members of the association during the period when I have been so signally honored I here and now give assurance of most sincere appreciation.

Secretary McLaurine Reports Progress

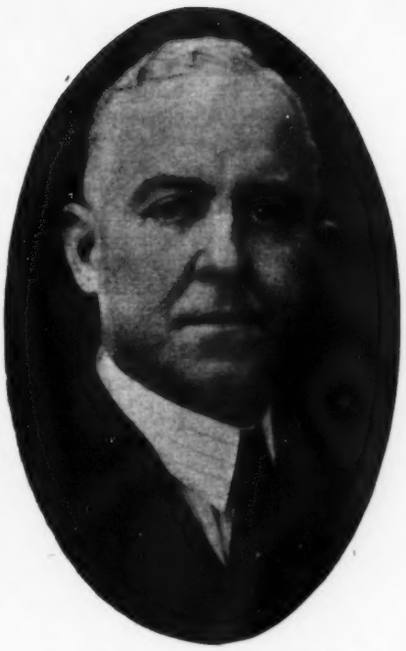
"THE American Cotton Manufacturers Association has been the great focal point of divergent interests in the progress of the southern textile industry," declared W. M. McLaurine, secretary and treasurer, in his annual report which described the versatile activities centering in his office. Cooperation with department stores and civic clubs in the promotion of cotton style shows, the collection of data with reference to proposed legislation, and assistance extended to educational institutions, were cited as examples of special work in which the secretary engaged during the year. In an area as large as the

South, with mills scattered from Danville to Dallas, according to Mr. McLaurine, the value and importance of an organization of manufacturers for the consideration of common problems should not be under-estimated.

The secretary's report follows in part:

I feel sure also that this southern organization made up of southern mills creates a cooperative consciousness that would not be possible otherwise. This adhesive quality is not only characteristic of the mill presidents and mill treasurers but it gives to the public a sense of the unanimity of purpose with which the southern mills work and the pronouncements and statements that are issued from this office directly and indirectly build an esprit de corps of incalculable value.

There occasionally comes out a statement among some of the mill executives that we are over-organized, that there are too many organizations; that there is overlapping of interests and effort, and expenses are rather heavy in belonging to these several organizations.



W. M. McLaurine, reelected secretary and treasurer of A.C.M.A.

Your secretary has inquired among other industries and finds that the same types of organizations exist among them because each organization has its own peculiar contributions to make and they are of sufficient value to prevent their annulment through the discontinuance of membership. Perhaps this feeling has been intensified during the last year because of economic conditions. Nearly every one has studied his budget more than he has at any other time and intangible values and general efforts have been in some cases location of the economic cut, but the wisdom of this act has been seriously censured by some of our greatest economists. It can be sanely illustrated by one single statement issued by a man of national repute: "Is it safe to leave the vessel in midstream?"

During the current year, President Geer has had made a valuable survey on the tax situation in the East and in the South, which survey has been given to each member of our association. We feel that this is a great contribution and contains valuable information, which is intelligent and convincing. Almost every week some form of publicity goes out of our office. It may appear direct or indirect, but this is one phase of our work that we feel is very effective.

We also maintain a close coordination with The Cotton-Textile Institute and the State associations, and the cooperative assistance that we give them and that they give us is one of the fine constructive contributions that we make.

These are not all by any means, but they are some of the concrete values that can be named and in return for these services, in return for this dignity and social prestige, in return for all of the fine cooperating qualities inured by this work, the charges are the most nominal and the most reasonable of any association in the South.

Reports of A. C. M. A. Committees

ROBERT LASSITER, Charlotte, N. C., submitted a report on the activities of the General Arbitration Board upon which he represents the association. He reports that the board had been organized and had already handled some cases satisfactorily. Rules have not yet been published, however. He hoped that some plan can be devised whereby the entire industry will join together with the board for the settling of all disputes.

An audit of the books of the joint cotton arbitration board, maintained by the association and the American Cotton Shippers Association, was read by S. M. Beattie, Greenville, S. C., chairman of the cotton committee. He reported that arbitrations during the last seven months have averaged only about half of those for the previous year but that it was hoped that the board would be self-sustaining. It was said to be functioning satisfactorily and that complaints reaching the board have not been as numerous as last year.

Carl R. Cunningham, Atlanta, Ga., traffic manager of the association, submitted his annual report which stated that negotiations with the railroads have been conducted for the purpose of establishing a uniform level of rates on cotton piece goods and manufactured cotton articles which will be applicable to all sections of the United States, east of the Mississippi River, thereby providing equal rates for local application in the North and in the South, and also inter-territorially.

Efforts have been made to establish the fact that coal rates to southern territory, outside of the Carolinas, are reasonable and should not be increased, but that rates to Carolina territory, which have been on a higher basis than any other section of the country, should be reduced. The traffic manager reported several rulings of the Interstate Commerce Commission that were favorable to textile mills in the South, including reductions in carload rates on old bagging and ties, on cotton from Texas, Oklahoma, Arkansas, Louisiana and Mississippi to points in the southeast and the Carolinas, on both carload and less than carload shipments of paper cones and tubes from Hartsville, S. C. to mill points in the South, and on sodium hydrosulphate residue in carload shipments between southern points.

In a recent decision, it was stated, the Interstate Commerce Commission declined to permit the establishment of milling in transit rates on cotton goods at southern bleaching and finishing points. This action, it was pointed out, does not invalidate the present system of special rates on unfinished goods and yarn in southern finishing and mercerizing points, but southern railroads have announced that their willingness to continue such rates within the South is predicted on securing the necessary authority from the Interstate Commerce Commission in conformity with the general revision in cotton goods rates.

Thomas H. Webb, Concord, N. C., chairman of the committee on The Arkwrights, Inc., reported that his committee had met with the board of directors of the Arkwrights and has continued to encourage the work of that organization.

The activities of the National Industrial Conference Board continue to be of sufficient importance to warrant the A. C. M. A. membership, according to the report of Stuart W. Cramer, which was, in part, as follows:

"One of its activities during the last year has been a preliminary report for the Textile Foundation upon the scope

of research in the realm of distribution. There has been a distinct feeling in the Textile Foundation that for the present its particular activities can best be directed to the changing factors in distribution, new methods and trends should be charted, and careful research made into the marketing of textile products.

"The National Industrial Conference Board is also giving a great deal of attention to the subject of transportation; the changes that have already taken place, let alone those which are obviously coming in the near future, warrant the closest study by all industry. Of course, these changes are of vital concern to the railroads of the country, and to the many trust funds that have been invested so largely in railroad securities; but, the whole question of rates of transportation and the time element may change the whole picture of marketing and even of industrial location."

Stone and Thoron Speak at A.C.M.A. Banquet

A SCHEDULED address by James C. Stone, chairman of the Federal Farm Board; an unscheduled address by Ward Thoron, president of the National Association of Cotton Manufacturers, and the introduction of several honor guests, featured the banquet of the American Cotton Manufacturers Association held Friday night of last week at Augusta. The honor guests, in addition to Mr. Thoron, included: George A. Sloan, president, The Cotton-Textile Institute; Floyd W. Jefferson, representing the Association of Cotton Textile Merchants of New York; Fred A. Rakestraw, president, Cotton Yarn Merchants Association, Philadelphia; Henry G. Lauten, president, Textile Converters Association; K. P. Lewis, vice-president, Cotton Manufacturers Association of North Carolina; T. M. Marchant, president, Cotton Manufacturers Association of South Carolina; Russell T. Fisher, secretary, National Association of Cotton Manufacturers; Carl Williams, of the Federal Farm Board; and officers of the A.C.M.A.

Mr. Stone made a remarkable impression by the frankness and clarity with which he discussed the policies of the Federal Farm Board. Probably not all those present who oppose the actions of the Board were converted by Mr. Stone's remarks, but certainly all must have been convinced of his sincerity. His address follows in part:

Donald Comer, elected second vice-president of A.C.M.A.

This country has about six and one-half million farmers producing crops and livestock with an annual farm value of from twelve to fifteen billion dollars. As we interpret the law, the Farm Board's job is to help all agricultural producers who are willing to cooperate with their neighbors in marketing their products and not just some particular section or the producers of some one crop.

Cooperative marketing is not new in this country, but the effort until recent years has been largely local in character. At the time of the passage of the Agricultural Marketing Act there were some 12,000 local associations, but in most cases each of these associations was marketing its products without much regard to what other associations handling the same product were doing. One of the requirements of the Agricultural Marketing Act is that the Farm Board assist in unifying cooperative activities with a view to producers controlling a sufficient volume of a particular commodity for them to have a voice in the marketing of that commodity.

The assistance given cooperatives has been designed to bring about the establishment of sound, well-managed agencies, owned and controlled by farmers, to market in an orderly way the products of those farmers.

As manufacturers of cotton goods you gentlemen are particularly interested in the operations of the American Cotton Cooperative Association of New Orleans, the central marketing agency for the short staple cotton cooperatives, and the Staple Cotton Association of Greenwood, Mississippi, which handles long staple cotton. These associations are nothing more nor less than big cotton merchants. They perform exactly the same services as other cotton merchants, but their prime object is to see at all times that the grower gets a price for his cotton that reflects the full amount paid for that cotton by the spinner in this country or abroad.

I want to say a few words about emergency stabilization activities engaged in by the board. Our experience convinces us that these can be resorted to only as temporary remedies and cannot cope successfully with continuous overproduction of a crop of steadily mounting surpluses. In accordance with the law stabilization operations, both direct and indirect, were undertaken in two commodities, cotton and wheat. They were inaugurated at the time of the stock market crash in the fall of 1929. They were intended to help protect the farmer's market for his products from extremely serious consequences that threatened as a result of the world-wide business depression.

So far as cotton is concerned, the loan value of 16c. per lb. established by the board to the cotton cooperatives in October, 1929, served to sustain the price for a period in which farmers marketed at least 5,000,000 bales of cotton. It is estimated this loan policy meant from eighty to one hundred million dollars to growers in marketing their '29 crop.

To protect all cotton growers in disposing of the 1930 crop, the board caused the Cotton Stabilization Corporation, which had taken over 1,300,000 bales of 1929 cotton, to announce that none of these holdings would be marketed prior to July 31 this year unless prices recovered in the meantime. Furthermore, it agreed to assist A.C.C.A. and the Staple Association in financing the handling of their cotton with the result they received 2,300,000 bales last fall. Students of the situation are authority for the statement that the relatively slow and careful marketing policy adopted by the cooperatives in this tremendous volume of cotton, together with the entire withdrawal of stabilization supplies, has exercised a wholesome influence on the level of cotton prices throughout the season with consequent benefit to every cotton grower as well as to those who belong to the cooperative associations.

In addition to the direct benefits obtained by cotton growers, the stabilization activities in cotton served as a steadying influence for banks, textile mills and other business that would have suffered even greater hardships had there been a further decline in cotton prices.

The board believes what was done to have been fully justified by the emergency that faced the industry.

Beneficial results from both cotton and wheat stabilization activities to farmers and the country as a whole are many times over any losses that may be sustained by the revolving fund.

Improved marketing and production of the kind and quantity the market desires are the most basic needs of American agriculture today. There is no magic by which the Government can supply them. They require action by the producers themselves. The Agricultural Marketing Act offers a sound and practical approach to obtaining them through organized effort on the part of producers. Our purpose is to extend every aid possible under the law and do it in the way that

will be most effective. We have no desire to try to compel farmers to do anything. We are helping them and will continue to do so, but they must do their part.

The idea seems to prevail in the minds of some men handling farm products that the Farm Board is out to destroy their business. We are not trying to destroy or injure anybody's business, but we are trying to help improve conditions in agriculture in accordance with the provisions of the Agricultural Marketing Act and we will continue doing just that.

Ward Thoron's Remarks

The substance of Mr. Thoron's remarks, but not a verbatim report, follows:

I bring the greetings of the eastern association to the southern association—the greetings of old men to young men. We are all interested in the business of cotton manufacture. I am both an eastern and a southern manufacturer.

I am concerned over the attitude of mind of my colleagues in this business. We all know the business is suffering from depression. In 1930 I sold in my southern mill 125 per cent of what I produced, without any difficulty. I didn't make any money. But the country absorbed what I sold and what you sold—and each of us could have gotten three cents or five cents a pound more if we had asked for it. But you and I didn't have enough sense to ask for three cents a pound more. Why we don't do it, I don't know. If we keep on conducting business this way, we are all going into bankruptcy. We can get a profit on our cloth as well as a loss.

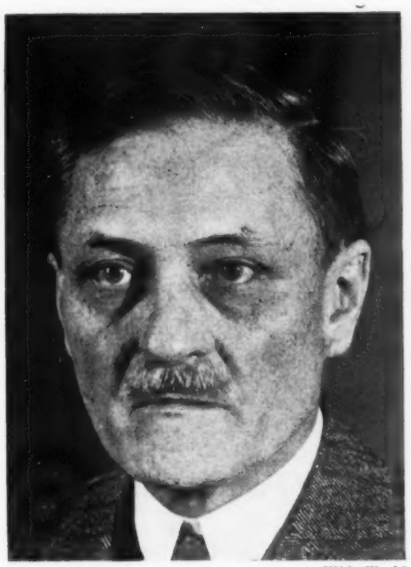
I've never undersold a competitor in my twelve years' connection with this industry. If you refuse to undersell a competitor, you'll make money. There is enough demand for your product to enable you to make money—if you will ask a fair price.

Undoubtedly the demand for your product is not as great as it was formerly. My friend Sloan thinks he has given you statistics which made it advisable for you to curtail. I think the reason you curtailed was price. Those mills which have gone ahead without curtailing at the expense of others are beyond contempt. They ought to be ostracized. How these men can justify themselves in behaving so is beyond understanding.

My good friends in The Cotton-Textile Institute and the Association of Cotton Textile Merchants of New York feel that, by supplying statistics, they can better the situation. If you feel they have, I congratulate you on your optimism. I don't feel so. If statistics were abolished and if our customers, in the ignorance of statistics, wouldn't feel they could stop buying, we would all profit by it. The sooner we abolish all public statistics, the better. I believe Mr. Sloan should have all the statistics available, and he could warn the groups that are in danger. I believe it is perfectly fatal to tell everyone what the situation is.

Regarding night work for women, I take the attitude that women should work when they please. But don't feel you touch the element of curtailment by deciding that women shouldn't work at night. An eastern manufacturer—I'll mention him by name, Mr. Kendall—who has been most prolific on this subject, has fixed his operations so that he works day and night with men.

I am from Massachusetts where they have shown more progress in humanitarian movements than any other State—and they have succeeded in their youthful enthusiasm, in ruining the industry. If you go to your legislatures to do things for you, you will regret it. I will stop night production with the next man, but I won't stop it if they use this basis of women and minors, because that is perfect hypocrisy.



Wide World

James C. Stone, chairman, Federal Farm Board, who spoke at A.C.M.A. banquet

Cason Callaway, The New President of A.C.M.A.

CASON J. CALLAWAY, of LaGrange, Ga., although one of the youngest executives to become president of the American Cotton Manufacturers Association, is recognized throughout the industry for his administrative genius and unusual capacity for thorough analysis. Born in LaGrange on Nov. 6, 1894, a son of the late Fuller E. Callaway, one of the South's outstanding manufacturers, Cason Callaway received his early education in the LaGrange elementary schools and the Bingham School for Boys, Asheville, N. C. Later he attended the University of Virginia, Charlottesville, Va., and completed a course in accounting at the Eastman School, Poughkeepsie, N. Y.

Almost immediately after leaving college in 1915 he organized and managed the Valley Waste Mills, a subsidiary of Hillside Cotton Mills, and after an interval of service in the Navy during the war, he returned to LaGrange and gradually assumed the executive duties of his distinguished father. In addition to directing the enterprises founded by his father, Cason Callaway has organized several other mills and developed many new products. The diversified line now distributed by Callaway Mills, in addition to ducks, drills, sheetings, tire fabrics, cords and yarns, includes chenille rugs, bath mats and towels, men's trousers, laundry textiles, canvas baskets, machinery wiping cloths and dozens of other products. Valway Rug Mills, the outgrowth of experimental rug manufacture started in 1922, which was not incorporated until three years ago, is already the largest producer of fast-color cotton chenille rugs in the United States.

At a time when the distribution of textiles is demanding more careful study than ever before, the American Cotton Manufacturers Association is fortunate in having as its president a man who has been unusually successful in developing additional markets for cotton materials and in creating new products for worth-while markets. Cason Callaway brings to the presidency of the association an extensive knowledge of the merchandising problems confronting the industry and is an enthusiastic advocate of increased cooperative effort for advertising and marketing research.

The new president has a splendid record of participation in the activities of associations in which he holds membership. In 1921 he served as president of the Cotton Manufacturers Association of Georgia and from 1922 to 1925 he was one of the southern members of the National Council of American Cotton Manufacturers. He was active in the formation of The Cotton-Textile Institute, has served that organization as a director, and for several years has been a member of the board of governors of the American Cotton Manufacturers Association. In addition, he is a member of the New Orleans Cotton Exchange and is president of the LaGrange Rotary Club.

New Approach to Farmer-Manufacturer Relationship *Reflected at Augusta*

THE idea of a mutuality of interest between the cotton grower and the cotton manufacturer is not a new one. Nor is the discussion of this theme at a manufacturers' convention a new experience. Nevertheless, there was noted at the meeting of the American Cotton Manufacturers Association in Augusta, Ga., last week an attitude which reflected a new approach to this old problem. There was a tendency to consider the farmer-manufacturer relationship as a practical, rather than an academic question. Lobby conversation—which after all is the best source of news at a convention—indicated that there was an interest in the farm problem on the part of the rank and file of the association, rather than being limited to the few who had planned the program.

Credit for this must go largely to B. E. Geer, president of the A.C.M.A. His belief that the mill situation cannot be improved unless there is a simultaneous improvement in the status of cotton farmers, is well-known; consequently it was no surprise that the convention held during his administration was devoted largely to this phase. However, prior to the meeting itself, some doubt had been expressed as to the interest which it might develop among the members. The program was even characterized by some as a "dead" one. After the convention there was a unanimity of opinion that a real contribution had been made—not to the farm problem as an abstract phase of our national life, but to the specific question of the relationship between the cotton farmer and the cotton manufacturer, and the possibilities for a mutual interchange of helpfulness between the two.

"I cannot understand the inner workings of the brain of a man who persists in trade practices which would obviously ruin him if employed by his neighbors, who continues to grind labor and machinery to all kinds of abnormal hours day and night only to demoralize the market during a time of general depression thereby retarding the business recovery which Government, business and social leaders are seeking so earnestly to accomplish."

—George A. Sloan

Manufacturers Must Help Solve Farm Problem

DEVOTING a considerable portion of his annual address to the problem of the southern cotton farmer, B. E. Geer, president of the A.C.M.A. declared that "we [the cotton manufacturers] cannot and must not ignore the cotton farmers both for their sakes and in our own interest." It was for this reason, he said, that the program of the Augusta meeting had been built around the keynote: "The Southern Cotton Farmer, the Producer of Our Raw Material." M. Geer's remarks on this subject follow:

It is to be questioned whether cotton manufacturing in the South can again reach a satisfactory and stable position until agriculture has been resuscitated, our farms have been re-populated, and many of the fundamental problems that are now facing agriculture have been solved. I cannot believe that our business as cotton manufacturers can permanently prosper unless this prosperity be shared with that great army of consumers who are at the same time the producers of our raw material.

While I do not believe that the cotton manufacturing industry alone can solve the problems of the farmer in the Southern States, I do believe that we can materially aid in this direction and it is my honest judgment that the time has come when the cotton manufacturer of the South must seriously consider the question of how to better the condition of the cotton farmer of the South.

Just what is the real condition of the cotton farmer? The answer is found in Bulletin No. 78 issued by the U. S. Department of Agriculture in September, 1929, giving the result of a study made by the Department in 1925 of the condition of farmers in a white farming area of the Piedmont section of the South. The experience of the year 1924 was made the basis of the study.

The result of the investigation is briefly this: Average receipts per family from all sources $591, expenditures per family for farm operations $167, leaving available for living expenses per family $424. Cash expended per family for living expenses averaged $291. This left available for savings or reductions of debts the meager sum of $133. To those of us born and reared in the cotton belt this is not an exaggerated picture of the firemen's condition.

In many respects the problem of the cotton manufacturer and of the cotton farmer is identical. We, as cotton manufacturers, have been wondering just what will be the outcome of the development of the textile industry in foreign countries, particularly in the Orient. Cotton manufacturing has grown with leaps and bounds in widely separated corners of the globe. The production of raw cotton has increased even more rapidly in foreign countries and the farmer may be just as disturbed about the future in this direction as we are. Both the growth and the manufacture of cotton in foreign countries is a matter of common concern and may prove to be an early menace both to the farmer and to the cotton manufacturer. Figures show that in the last

six months England, our largest foreign customer, has reduced the consumption of American cotton more than half. If the wholesale destruction of the export market for American grown cotton progresses much farther, it may be that the consumption of American cotton in a few years shall be confined to American mills and total less than half of our normal production. This eventually is certainly within the range of possibility. It is not difficult to see what such a change would mean to the 2,000,000 cotton farmers of the United States.

Reference will be made later to taxes paid by southern cotton mills. The deflation of the farms has brought about serious losses in farm property values and consequent heavy reductions in tax receipts from this source. More and more the burden of taxes is falling upon the shoulders of other classes to take care of the increasingly heavy demands to cover governmental expense. The establishment of the farmer of the South in prosperity is one way to secure for the cotton mills some relief from our present excessive tax burden.

With this reference to the cotton farmer and to the intimate relation that exists between his economic and social betterment and the prosperity of our own business, I leave further discussion of this subject to those better informed persons who will speak to us later. In our program provision has been made for discussion of the farm problem in its relation to the future of our industry.

There is another phase of the intimate relationship between the cotton manufacturer of the South and the producer of our raw material, one apparently wholly ignored by our versatile critics and too little regarded by ourselves.

The prostration of agriculture in the South reacts seriously upon our mill villages to which farmers, especially tenants and croppers, are migrating in ever increasing numbers. It is well known that we get our cotton mill workers from the farms. This has been the source of supply from the beginning of the development of the textile industry in the South and is still our source of supply. The cotton mill workers compete only with people from the farms for jobs in the mills. So long as the family income on the farms and living conditions on the farms are below the family income and living conditions in the cotton mill villages it will be difficult to make substantial progress in improving the economic and social conditions among the mill workers.

If our critics who see things in the mill villages to criticize would only recognize the distressing problem of how to improve the condition of the southern farming class, they would be laying the foundation for real constructive work.

Today the mill villages throughout the South all have a surplus of workers, people begging for work. The manufacturers have not invited this situation. They are under the pressure of it. So far as I can see any effort to materially improve the condition of the mill workers throughout the Piedmont section of the South is bound to fail unless our plans and activities and sympathies include the thousands of tenant farmers and croppers whose economic situation is enough to break the heart of a nation. We may criticize the cotton mill executives and shed oceans of tears over the plight of the mill workers, but until we really and seriously and honestly deal with that more unfortunate class out of which the cotton mill workers come we shall not be doing anything to help either class.

Mills' Activities Are Helping Cotton Farmer

THE cotton manufacturers have provided for the farmer, as well as for themselves, a promotional and stabilizing agency in The Cotton-Textile Institute which is bound to be of constantly increasing value, stated George A. Sloan, president of the Institute, in discussing "Farm and Mill Relief" at the Augusta convention. The constructive activities undertaken by the industry are aimed to restore cotton to its rightful place among the profitable industries of the country, said Mr. Sloan. His address follows, in part:

B. E. Geer, retiring president of A.C.M.A.

"So long as the family income and living conditions on the farms are below the family income and living conditions in the cotton mill villages, it will be difficult to make substantial progress in improving the economic and social conditions among the mill workers."

—B. E. Geer

If asked to describe in one word what is needed most today in both agriculture and industry the obvious answer would be stabilization. The whole world has been suffering from lack of economic adjustment resulting in an accumulation of surplus commodities. Is it surprising that we hear leaders in all walks of life pleading for stabilization—stabilization of production whether grown or manufactured?

Stabilization has indeed become the watchword of business men and economists.

Applied to cotton manufacturing, any conception of stabilization includes an intelligent balancing of production with demand.

Cotton farmers are vitally concerned with the successful application of this principle in cotton manufacturing. Cotton manufacturers are equally concerned that the farmers grow enough but not too much cotton.

It is obvious that conditions of stability both in the cotton market and in the primary market for cotton goods will be of mutual benefit to cotton farmers and manufacturers. The stability of one makes for the stability of the other. Certainly the mills like to see stability in cotton prices because a falling market for cotton means a falling market and consequent hesitation and loss of business in respect to cotton goods.

With balanced production, hand-to-mouth buying becomes less acute, at least to the extent that it has become unreasonably accentuated, due to the fear which overproduction and surplus stocks raise in the minds of buyers. Removal of this fear, even though the process at times seems painfully slow, serves to encourage increased consumption of cotton goods.

Greater regularity of mill operation in turn will induce regular purchases of cotton with an accompanying tendency toward stability of raw cotton prices.

When the converters and other important distributors are buying cotton goods with some degree of regularity, they are thus making commitments for the sale of cotton goods and hence are putting the whole force of their selling organizations into the effort to move these goods; whereas if through instability they are not buying goods, or are buying only the minimum amounts, they are, in the nature of things, not pushing the performance of their sales organizations to anything like the same extent; and the result is that there is a loss in the movement of cotton goods to other fabrics or simply to entire non-action, and this will probably not be

made up later; so there is an absolute net loss in amount of cotton and cotton goods consumed.

Uphappily, this problem of overproduction has been as prevalent and destructive in cotton farming as in cotton manufacturing. The farmer and the manufacturer have been sitting in the same over-crowded boat. They have been suffering largely from a common habit of producing more than the consumer will take.

Until recently the presence of excessive stocks in the hands of manufacturers, the long history of overproduction in the industry, and the ever-present threat of further excessive production through indiscriminate night operation at the slightest excuse, contributed to a chronic lack of confidence on the part of buyers and financiers and discouragement throughout the industry. Such conditions influence buyers to narrow their purchases and inventory to such a degree as to stifle business, resulting in a sense of insecurity throughout the cotton trade. If distributors of cotton goods have little faith in the stability of the market, they naturally avoid carrying adequate stocks with the result that their shelves contain meager assortments from which the consumer can select. Consumption of raw cotton has unquestionably been limited by these factors.

George A. Sloan, president, The Cotton-Textile Institute

Remarkable progress has been made by the cotton mills during the last few months in putting their affairs in order, particularly in this major problem of better balancing production with demand. Stocks in many groups have been reduced to the lowest point recorded in the industry's statistics. The increase in sales for the first quarter of the year was in excess of the usual seasonal business but the urge to overproduce as heretofore experienced under similar conditions has this year been less conspicuous. It is my belief that this is due largely to the reduction in excessive hours of labor, the new tendency to concentrate operations on the day shift, and the determination to liquidate excessive stocks.

The educational efforts of The Cotton-Textile Institute as thus far developed look to the correction of unsound methods of production and to the establishment of more stable conditions. In the compilation and distribution of statistics as a guide for sound merchandising, in encouraging greater uniformity in running time, in pointing out the advantages of balanced production and the harmful effects of overproduction, in urging mills to base their selling policies on sound cost principles—in all these activities we have endeavored to restore cotton to its rightful place among the profitable industries of this country. I believe the observance of these principles is a requisite foundation in building up any permanent increase in cotton consumption.

The public should realize, however, that progress along these constructive lines is being accomplished by the cotton mills despite the fact that we still have in our industry a few individuals who, through poverty of mind or selfishness of spirit, show utter disregard for the law of supply and demand. I cannot understand the inner workings of the brain of a man who persists in trade practices which would obviously ruin him if employed by his neighbors, who continues to grind labor and machinery to all kinds of abnormal hours day and night only to demoralize the market during a time of general depression thereby retarding the business recovery which Government, business and social leaders are seeking so earnestly to accomplish.

The market for raw cotton is similarly demoralized when farmers persist in planting and growing more cotton than is currently being consumed. A proper restriction of acreage has the two-fold advantage of promoting stable prices in raw cotton and also in cotton goods, and stabilization thus realized promotes regular and increased consumption.

Many helpful influences at work in our industry aimed directly at increased consumption of cotton are assuming encouraging proportions. First of all, there is an increasing cotton consciousness in the cotton-growing States partly due to the wave of "Wear More Cotton" movements now sweeping the South and Southwest. More than 94 cities and towns in ten States have requested the Institute's assistance during the last few weeks in local style shows and carnivals.

The cotton manufacturing industry has progressed far in the development of new textures, weaves and patterns, and today we find style leaders sponsoring cottons to a degree hitherto unknown. The families of cotton farmers, in view of climatic conditions, should particularly desire to use cotton goods which offer coolness, convenience and a remarkable combination of extremely attractive clothes at inexpensive prices.

Moreover, the advantages of cotton for household uses, familiar as they are to all of us, might further be dramatized on these occasions. To mention a few—full length sheets and other bedding requirements, towels in attractive colors, rugs, curtain and drapery fabrics, and a variety of wall coverings.

These occasions might also serve to educate the public as to the utility of cotton for a variety of other purposes. Take, for example, cotton bags: The market for cotton bags, long established though it is, can be extended immeasurably in connection with the growing trend of packaging foodstuffs of all kinds in small retail sales units.

I have in mind, too, that through these cotton festivals a great number of the industrial uses for cotton could and should be stressed to advantage. The utilization of a cotton fabric membrane in the construction and improvement of top soil roads offers an opportunity to consume cotton "by the mile" for a wholly new purpose. This year for the first time on any notable scale Florida oranges were shipped in retail packages. More than 300 carloads were packed in cotton bags.

To the cotton farmer particularly should be brought home the important advantages of using cotton. How inconsistent it is for him to utilize fabrics other than cotton for bale covering!

Between 200,000 and 250,000 bales of cotton would be required to manufacture the baling fabric needed to cover a 15,000,000 bale crop. By a determination to sell cotton on a net weight basis and using cotton fabric for bale covering, the farmers can increase greatly the consumption of cotton and at the same time afford profitable occupation for many mills and their employees. The farmer has placed himself in the anomalous position of selling cheap wrapping material of negligible salvage value at the price of the clean cotton it surrounds. Any questionable advantage which he derives from this practice would be more than offset by increased consumption that would result from the use of cotton baling materials. Net weight for cotton has won the approval of leading cotton growers, shippers, dealers and manufacturers the nation over. Prominent members of Congress and Government officials have advocated this change. It is a well-known fact that American farmers suffer an actual loss through the 6% deduction for tare taken by foreign buyers. Moreover, they, as well as domestic consumers, have complained constantly about the damage occasioned to cotton by the present haphazard and unsightly method of baling. Is it not high time for aggressive and concerted action on the part of all the influential agencies concerned?

Moreover, the farmer should use his forceful influence in having his fertilizer shipped in cotton bags.

One of the most striking new uses for cotton has been the development of cotton letterheads. In the short space of eight months this idea spread over the nation and now business firms in widely scattered lines from chewing gum to automobiles are writing on *(Continued on page 69)*

A. C. M. A. Studies

American Cotton and its Future

at Annual Session

THE actual outlook for American cotton is today brighter than at any time in the last two years, according to Carl Williams, member of the Federal Farm Board, whose address featured the afternoon session Friday. He pointed out that a reduction in the cotton supply of foreign countries outside of Russia may be expected, that the low point of restricted consumption of American cotton abroad has probably been reached and passed, and that the future is certain to bring definite recovery in business activity and industrial in foreign countries as well as in the United States.

Round-table discussion on "American Cotton and Its Future," following addresses by Dr. W. W. Long, dean of the agricultural department, Clemson College, S. C., and Mr. Williams, was led by B. B. Gossett, president, Chadwick-Hoskins Co., Charlotte, N. C., who opened the afternoon session with introductory remarks on the problems faced by the American cotton farmer.

"In the last three or four years," Mr. Gossett said, "world consumption of American cotton has declined sharply while consumption of foreign cotton has greatly increased. In fact, in the last year, for the first time since the Civil War, the world's consumption of American cotton has actually been exceeded by the world's consumption of other kinds of cotton. It is therefore obvious that this subject is of major importance—not only to the South and the southern cotton growers, but to the nation as a whole.

"Based on the present outlook, the future holds very little that is encouraging to the farmer and the many other millions in the South whose economic existence is largely dependent upon his welfare. The only really constructive remedy that has been offered for the ills of the cotton farmer is a well balanced farm program which of course includes a diversified production of farm products, including the growing of feedstuffs and foodstuffs not only in amount sufficient to maintain the farmer himself, but such surplus as can be readily sold in his own immediate territory. Such a program also involves a reduction in acreage, the selection of better cotton seed and more intensive cultivation with the view of improving quality, increasing the yield per acre and lowering the cost of production. The matter of lowering production costs in the growing of cotton is just as necessary to the success of the farmer as it is to successful operation of any enterprise in industry or commerce."

W. D. Anderson, president, Bibb Mfg. Co., Macon, Ga., urged every manufacturer present to return to his community and exert every influence in behalf of an intelligent program for the rehabilitation of southern agriculture. He declared that farming on a scientific basis is a profitable business and that in every county is a small handful of people who make a profit from the soil. He considered the successful organization of American farmers to be the most important objective of the Federal Farm Board; and, in addition, expressed pleasure of hearing Carl Williams say that this body recognizes its function to be something besides attempting to stabilize the price of farm commodities by purchasing surplus stocks. Mr. Anderson hoped that some plan could be developed whereby the acreage under cotton cultivation could be reduced to approximately 30,000,000 acres upon which 15,000,000 bales could be produced annually at an average cost of less than 10c. per pound.

Robert Lassiter, Charlotte, N. C., could not see how the farmers will grow as much cotton as previously because of the restricted credit available through country banks.

Southern Mills Should Encourage Farmers

THE first speaker of this session was Dr. Long, who discussed "Why South Carolina Leads in the Production of Longer Staple Cotton." He described the interesting steps in efforts to improve the staple of cotton grown in that State, particularly through prize contests. He observed that South Carolina mills are paying premiums to the farmer for better grades and staple of cotton and stressed the importance of continuing this policy as an encouragement of improved quality. His address, in part, was as follows:

In 1926, the first year of the contest, 54.6% of lint produced on contest plots was $\frac{7}{8}$ inch or less. In 1930 only 8.55% was $\frac{7}{8}$ inch or less. The production of $1\frac{1}{16}$ to $1\frac{1}{8}$ inch staple by the contestants has increased as follows: 1926—40.8%; 1927—61.9%; 1928—78.3%; 1929—79.8%; 1930—87.85%.

During the five years of the contest over 4,000 farmers have entered five-acre plots. Ninety-five per cent of these plots have been planted with pedigreed or improved seed. Each contestant has become a source of good planting seed. The effect of this use of seed producing better staple is becoming more and more apparent in the State cotton crop. According to reports of the Bureau of Agricultural Economics, a higher percentage of South Carolina's crop was of desirable lengths than of any other southeastern State in 1928, 1929 and 1930.

Marked progress has been made during the last five years toward growing the type of staple consumed by South Carolina mills, but the goal has not yet been reached. With increasing foreign competition in growing the shorter staples and with the prospect for continued low prices, it is imperative that South Carolina farmers continue to improve the quality of cotton by using improved seed and to reduce the cost of production by the use of labor-saving machinery

Harris & Ewing

Carl Williams, member of Federal Farm Board

For the first time in years, stated Carl Williams at Augusta, the textile industry has paid attention to its unfilled orders and stocks on hand. It no longer is trying to produce as much as its equipment will permit. The effect has been shown in the statistical position. The industry should continue to observe this constructive principle, he said.

B. B. Gossett, elected first vice-president of A.C.M.A.

and to increase the yield per acre by applying those methods of cotton production that have proved to be successful.

Those of us who have given special thought realize that this present condition of agriculture has been accentuated by the extravagant and unwise use of credit; second, that the contributions of the scientific man for the last 50 years have made the task to make a living more difficult for the ignorant and especially the shiftless and thriftless. They cannot compete with modern methods.

Certainly the solution is not in legislation and large appropriations to be utilized in an effort to defeat the law of supply and demand. The law of supply and demand is one of the natural laws like the law of gravity. The same agency that is responsible for the spiritual laws is responsible for the natural laws. These laws may be thwarted temporarily but not without disaster if anything of a permanent character is undertaken.

Permit me to mention briefly some of the service that the Federal Farm Board has rendered to South Carolina agriculture, with which I am entirely acquainted. It was through their efforts that the South Carolina Cooperative Tobacco Association was organized; they cooperated in reorganizing the South Carolina Cotton Association; they made an intelligent and comprehensive survey of the canning industry of the state. They will be engaged within the next few days in making a survey as to the marketing of the corn crop of South Carolina. They have waged an intelligent campaign in cooperation with the Extension Service in informing the farmers as to the outlook of prices that may be expected for different farm crops, especially cotton.

I have frequently stated that I am a hopeless optimist when it comes to the agricultural potential power of the South. It is my belief that the day is not far distant when every planter and farmer will be so well instructed by the scientist that he will "mold the soil to his profit and the seasons to his plans, and he will cause the soil to become responsive to the touch of industry and the harvest more abundant to meet the measure of a larger hope."

Supply and Demand Factors Discussed

DECLARING that there is no prospect whatever that the "threatened tragic disappearance" of American cotton from the world markets can or will take place, in his interesting address illustrated by numerous diagrams and charts, Carl Williams injected an optimistic note into the program for the afternoon session. He called attention to the fact that exports of American cotton in February of this year were 31,000 bales more and in March were 127,000 bales more than in the corresponding months of 1930. Furthermore, 60,000 bales of American cotton have actually been exported to India this year. His address follows, in part:

This discussion on "The Outlook for American Cotton" may serve two purposes. First, it may provide some indication of the actual supply and demand situation. Second, it may at least indirectly answer that concerted, centrally-directed, sometimes vicious propaganda on the part of certain special cotton trade interests to the effect that the policies of the Federal Farm Board and of the cotton cooperatives are responsible for the present reduced consumption of American cotton and are rapidly ruining foreign markets for the American cotton farmer.

That farmer is suffering today from reduced buying power caused by low cotton prices, and, along with the textile industry, is suffering from a greatly reduced demand for cotton goods. A common enemy is hurting both the cotton grower and the cotton spinner. That enemy is the acute, unusual, especially severe business depression that has engulfed the entire world and has been especially felt in the more industrialized nations.

The drop in the consumption of cotton goods has been brought about by five things: first, the drop in business activity; second, reduced earnings of labor in both city and country; third, smaller income from agriculture caused by extensive drought and the low price of farm products; fourth, by sharp and drastic falls in the prices of all raw materials, especially those from the tropics, such as rubber, coffee and tin; and, fifth, the fall in the value of silver. Practically all of these factors, except the unusual drought last summer in this country, can be traced directly to the recession in business activity.

There is every indication that the end of the lowest point of the present cycle of consumption and supply has about been reached. As relative supply increases, the price differentials between American and foreign-grown cottons are certain to increasingly favor the consumption of American cotton abroad. These favorable differentials may be expected to continue to increase during the remainder of this season and through the next one.

In Russia it is not likely that the low price of cotton will bring about any reduction in the crop of 1931. Both land and water for irrigation are apparently available for continued expansion under the Soviet plan for a number of years to come. The latest estimate of Russian production for the current season is 1,850,000 bales, and the Russian estimate of production next season is 2,200,000 bales.

It is reported that about 180,000 bales have been exported

from Russia so far this season. The cotton is of good character bread-and-butter staple, and it is coming into rather direct competition with the better grades of American cotton in European markets and is offered at prices approximately 1c. a lb., under those asked by American growers.

It seems clear that Russia will tend to be an exporter of cotton for a number of years at least, if not permanently. This means the more or less permanent loss of a foreign market for about 300,000 bales of American cotton annually, plus a certain amount of competition in foreign markets as the result of Russian exports. It may be that as Russia becomes intensely industrialized she will be able to use all the cotton she grows, but there is no evidence of that yet.

In the United States this year the acreage will be cut somewhat. It is too early to guess how much, but it is safe to say that it ought to be more. The real salvation of the southern cotton farmer this year will depend more on his ability to raise his own food for the family and feed for the teams than on high prices for cotton.

To sum up the whole situation, therefore, it would appear that the actual outlook for American cotton is today brighter than it has been at any time in the last two years. The low point of restricted use of American cotton abroad has probably been reached and passed. Prospects are all for an actual reduction in the cotton supply of foreign countries outside of Russia.

Time is certain to bring definite recovery in business activity and industrial production in foreign countries. Time is equally certain to bring recovery in business activity and industrial production in this country.

COTTON CONSUMPTION IN U.S. AND NET POSITION OF MILLS ON STOCKS AND ORDERS

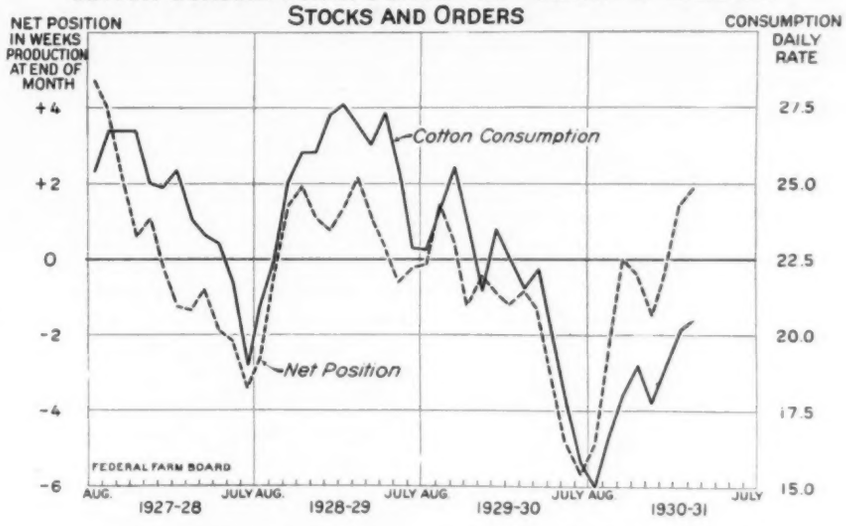


Chart prepared by Economics Section of Federal Farm Board showing cotton consumption and net position of mills, exhibited by Carl Williams at Augusta meeting of A.C.M.A.

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New Approach to Farmer-Manufacturer Relationship

(Continued from page 66)

cotton. Even more amazing is the development and interest in the use of these same letterheads for broadcasting manuscripts.

The use of cotton cloth hay caps for the curing of alfalfa hay, suggested by a Kentucky farmer two years ago, has since been promoted by the Institute and has proved so successful that several large seed dealers are now advocating and illustrating this use in their 1931 seed catalogs.

Road maintenance and construction signs of enameled letters on cotton cloth mounted on wire frames have proved so practical and economical that they have been adopted by telephone and other public utility companies to protect their repair gangs while at work.

Joined to the Institute's work in developing both new and established markets for cotton are the constructive studies of the U. S. Departments of Agriculture and Commerce.

Recently a new duplex fabric for bags—now accepted for commercial mill production—was developed on the experimental looms of the Department of Agriculture at the North Carolina State College. Small sized bags for fruits, vegetables and nuts, of open mesh on one side and solid weave on the other, can now be made economically from the single width of this ingeniously devised fabric which combines visibility and strength. Another important contribution being made in behalf of the cotton industry by the Department of Agriculture is to be found in its two-year survey, now nearing completion, into the possibilities of securing a more general use of cotton pick sacks on the part of cotton growers.

Looking back over the constructive and diversified developments in our cotton industry during the recent past, I feel that the cotton manufacturers have provided for the farmer, as well as for themselves, a promotional and stabilizing agency in the Institute which is bound to be of constantly increasing value. By avoidance of overproduction, by insistence upon complete statistical information, by study of full and accurate cost data, by determination to extend the use of cotton material, and by constant concern for their employees and for the public which consumes their products, farmers and manufacturers can benefit themselves and benefit each other. The observance of such policies of mutual self-help will hasten the new day for King Cotton.

Combating Corrosion *in the Textile Industry*

By Ray Cottrell

SELECTION of equipment to combat any single corrosion agent is a comparatively simple problem compared with the complex situation arising from the exposure of textile machinery to the successive action of widely different chemicals. Few indeed are the instances in the textile mill where equipment is exposed to the continued action of only one corrosive. Furthermore, the conditions in the average bleaching, dyeing, and finishing plants are different from those in many other establishments, in that damage to equipment is not the only phase of the problem to be considered. In fact, it is quite possible for it to be relegated to secondary importance in the case where corrosion may cause more damage to goods in process than to machinery or equipment.

Examples of possible damage to goods are to be encountered in the dyehouse, where selection of the wrong metal for use in dyeing machines may result in a dulling of shades whose brightness is their chief asset. Another case in point frequently arises in the bleach house, which on account of the large quantities of water in use, is a prolific source of iron rust. Should this rust, which generally does not require very much persuasion, become attached to the goods and be carried into the bleach liquor, irreparable damage may result. This phenomenon is not the exclusive property of iron or iron rust, but may also be occasioned by minute particles of nickel, brass, etc., and is brought about by an intense local activation of the chemic (either sodium or calcium hypochlorite) to produce oxycellulose in the case of cotton goods. This in turn will give rise to light or dark spots in the dyehouse according to the class of color used, or in very severe cases may even cause minute holes to appear in the finished material.

Causes of Corrosion

Before considering specific examples of corrosion in the plant a few words on its origin and the controlling factors in the selection of materials with which to combat its inroads will be opportune. Corrosion is essentially caused by the electrolytic action set up by the contact of dissimilar metals in the presence of an electrolyte; i.e. a solution of an acid, alkali or salt. In the case of two dissimilar metals in contact in the presence of an electrolyte, one metal will corrode or dissolve and will continue to do so until either is has been completely destroyed or until equilibrium has been established in the system. The other metal (known as the noble metal, electronegative, or cathode) will remain unharmed.

By dissimilar metals, not only widely different element-metals, such as copper and nickel or zinc and tin, are indicated, but it is quite possible for the constituents of an impure metal to function as dissimilar metals. Commercal iron and steel invariably contain impurities as compounds of iron with carbon and other elements or metals. Thus these different compounds act as dissimilar metals to the purer portions of the iron. The pure iron, being electropositive to the impurities, is corroded in the presence of electrolytes. In order to prevent this corrosion of the pure iron it is necessary therefore to place it in contact with a more electropositive metal, such as potassium, barium, sodium, magnesium, aluminum, manganese, or zinc, of which the last is the most suitable. This phenomenon is frequently taken advantage of in the prevention of the corrosion of the inside of boiler plates when exposed to the action of feed water containing such salts as sodium, calcium, and magnesium chlorides, sulfates, etc. in solution. By a suitable arrangement of the immersed contact of zinc and the boiler plates a certain measure of immunity to corrosion is obtained, though this action is localized and is said to require 2 oz. of zinc per sq.ft. of boiler plate.

The part played by the electrolyte cannot be over-

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Corrosion costs the textile industry many thousands of dollars each year in destruction of equipment and spoilage of goods. Storage, transportation, and use of chemicals in suitable corrosion-resisting containers and equipment would eliminate much of this waste. In the accompanying article the author has assembled a large amount of data pertaining to the action of various chemicals on metals and other materials used in textile equipment. Information from publications, such as *Chemical and Metallurgical Engineering*, *Industrial Chemist*, and *Chemical Manufacturer*, has been correlated and this has been supplemented with further details derived from the author's personal association with the chemical and textile industries.

Chemical	Principal Uses	Corrosion-Resistant Properties		
		Ferrous Metals and Alloys	Non-Ferrous Metals and Alloys	Wood and Other Materials
SULFURIC ACID (Oil of Vitrol) Commercial strengths 53 to 66° Bé. = 66.6 to 93. 2%.	Employed extensively in bleaching, dyeing, and mordanting of textiles; for carbonizing wool; and for neutralizing textiles which have been treated with alkalis.	At high concentrations may be stored with safety in cast-iron (preferably having a low graphitic-carbon content), wrought iron, or steel tanks. At 80% it begins to attack steel and at 70% it dissolves wrought iron and cast iron. All temperatures (except that of boiling) and concentrations may be handled safely in Duriron and Tantiron (high-silicon irons), stainless steel (iron-nickel-chromium with small amounts of manganese, copper, and carbon); ferrous alloys of the type: iron 20%, nickel 60%, molybdenum 20%; since sulfuric acid is hygroscopic it is of the utmost importance when storing concentrated solutions in iron or steel tanks that the ingress of air be rendered impossible.	All temperatures (below boiling) and concentrations may be handled in non-ferrous alloys of the type: nickel 90% silicon 5%, copper 3%, and aluminum 2%. Both the dilute and concentrated acids have but slight action on copper phosphor-bronze (90 to 95% copper, 10 to 5% tin with a trace of phosphorous), and Monel metal, in the cold and in absence of air. However if the metal be exposed to oxidation, the resulting copper oxide readily dissolves in the acid. For resistance to attack by any concentration lead is extensively employed, the purer the metal the greater its resistance to corrosion. Unfortunately chemically-pure lead is comparatively soft and therefore is not recommended for many purposes. Addition of small amounts of arsenic, copper, etc., while serving to harden the lead, diminishes its resistance to attack by sulfuric acid. Antimonial lead (93% lead, 7% antimony), however, while being considerably harder than pure lead, is as resistant to attack.	Wood which contains a high percentage of tannin materials should be avoided lest it give rise to dark stains in the presence of iron and badly stained goods when dyed with basic colors. Fir and yellow pine, though resisting the action better than other types of wood, such as cypress and redwood, have but a comparatively short life in contact with 10% cold and 5% hot sulfuric acid. For increased resistance to acid of dilute and medium concentrations wood equipment may be given a paraffin or asphalt coating or lined with lead, copper, Monel metal, soft and hard rubber (resistant to acid of 50 and 60% up to 150° F. respectively). Linings of acid-proof brick set in litharge, acid-proof cement, or asphalt may be used. Concrete which is exposed to the action of dilute sulfuric acid should be coated with mastic and covered with sheet lead for the concentrated acid. Enameled steels are recommended for all concentrations.
HYDROCHLORIC ACID (Muriatic Acid) Commercial strengths 20 to 22° Bé.	Employed widely in bleaching and dyeing.	Concentrated hydrochloric acid readily attacks all the commoner ferrous metals and alloys, such as find use in textile mills, the following approximating the order of the ease of their corrosion:—steel, wrought iron, and cast iron. High-silicon irons and stainless steel though fairly resistant, corrode more or less slowly, necessitating replacement. Dilute solutions rapidly attack steel and wrought iron, and good quality close-grained cast iron but slowly. Nickel-iron-molybdenum (60-20-20) is particularly resistant to concentrated hydrochloric acid at room temperatures.	Concentrated solutions attack copper, bronze, phosphor-bronze, chemical lead, antimonial lead, aluminum, nickel, and Monel metal. In absence of air, the dilute acid has practically no action on copper, lead, brass, and phosphor-bronze in the cold, but (with the exception of lead, these metals are corroded by hot dilute hydrochloric acid. Chemical lead, antimonial lead, nickel, and Monel metal, though fairly resistant to the concentrated acid, corrode more or less slowly, necessitating replacement. Nickel-silicon-copper-aluminum (90-5-3-2) and cobalt-tungsten-chromium alloys are of excellent resistance to the concentrated acid.	Acid of 20% cold or 10% hot may be stored in tanks of cypress, fir, or yellow pine. For removal of fumes of hydrochloric acid ducts of wood and asphalt or paraffin—coated wood have proved satisfactory. In bulk the acid is handled in rubber-lined tank cars, rubber or glass-lined steel tanks; smaller quantities are stored in glass carboys, stoneware, and enameled-steel tanks. All concentrations of hydrochloric acid have no action on soft or hard rubber, high softening-point coal-tar pitch, and bitumen, up to 150° F. which properly renders them suitable for lining steel, wood, and concrete tanks. Acid pumps are generally made of stoneware or hard-rubber lined steel. For conducting the concentrated acid to various parts of the mill, glass, stoneware, hard-rubber and rubber-lined steel pipes and rubber hose are employed.
ACETIC ACID Commercial strengths 28%, 56%; glacial	Has wide application in dyeing of wool, silk, cotton, and synthetic yarns; mordanting; stooping of silk; after-treatment of dyed textiles; etc.	Metals or alloys which are quite resistant to all concentrations of acetic acid are: high-silicon irons, chromium steel (18% chromium), chrome nickel steel (18% chromium; 8% nickel), chromium-nickel-silicon-iron. For transporting all concentrations from one part of mill to another, pipes of high-silicon irons have proved satisfactory; pumps are available in high-silicon iron and chromium steel.	Copper and aluminum are both highly resistant to concentrated acetic acid, but aluminum is attacked more readily than copper by the dilute acetic (below 20%). However in presence of air or oxidizing agents copper is corroded by acetic acid of all concentrations in excess of 28%. Furthermore, aluminum is attacked by acetic acid containing even small quantities of formic acid. Bearing in mind the precautions necessitated by these properties, concentrated acetic acid may be shipped in aluminum tank cars and stored in aluminum, copper, or Monel metal equipment. Metals and alloys which are quite resistant to all concentrations are chromium-copper-molybdenum, Monel metal (in absence of oxidizing agents), nickel, and aluminum bronze (10% aluminum). Pipes of aluminum, copper, and Monel metal, and pumps of aluminum, aluminum-bronze, and Monel metal are used for transporting all concentrations from one part of the mill to another.	All but the concentrated solutions and glacial acetic acid may be handled quite satisfactorily in wood. It may be shipped in rubber-lined tank cars and stored in glass-lined equipment for transporting all concentrations, pipes of glass, enameled steel, fused silica, hard rubber, and hard-ribber-lined steel have proved satisfactory. Stoneware and hard-rubber lined pumps are available.
NITRIC ACID Commercial strength 36 to 42° Bé.	Application limited largely to stripping of shoddy and etching of copper printing rollers.	Iron and steel are fairly resistant to the highly concentrated acid but are rapidly corroded by the dilute acid. When in contact with acid of 40% or over, iron becomes "passive" and behaves like a noble metal. The addition of 5% of sulfuric acid enhances this passivity and enables concentrated acid to be handled with ferrous metals and alloys. The behavior of nitric acid on the stainless steels is dependent on the source of the acid. Nitric acid manufactured from Chile saltpeter contains traces of chlorides, bromides, and iodides all of which attack low-chromium steel. Concentrated synthetic nitric acid (arc or ammonia oxidation process), does not corrode chromium steel appreciably, but dilute acid will attack the metal unless a chromium content of at least 18% and less than 0.12% carbon be employed. The high-silicon irons and chromium-nickel steels (18-8) exhibit excellent resistance to nitric acid of all concentrations and temperatures, with the latter probably somewhat superior. The concentrated acid may be shipped in tank cars if 5% of sulfuric acid is added or if a steel alloy containing at least 5% of chromium is used. Aluminum and chromium-steel (18-8) drums are frequently used for shipping.	By reason of its powerful oxidizing properties, both the dilute and concentrated acids rapidly attack all the common metals, such as brass, phosphor-bronze, copper, nickel, Monel metal, and lead. Pure aluminum suffers very little corrosion from acid of all concentrations at room temperatures and aluminum containing about 1.25% manganese is even better.	Wood is not recommended for handling even the dilute acid. Rubber-lined wood, steel, or concrete tanks are not recommended for acid of over 20%.
SULFUROUS ACID Produced by burning sulfur or by action of mineral acids on sodium sulfite or bisulfite. Available as sulfur dioxide in liquefied or compressed form in cylinders.	Employed mainly in bleaching or stoving of wool and as an anti-chlor in bleaching vegetable and synthetic fibers.	All ordinary forms of iron and steel must be avoided, though it is interesting to note that liquefied sulfur-dioxide is shipped in steel cylinders. For anti-chloring purposes, metals and alloys which resist the action of dilute hydrochloric and sulfuric acids will withstand the action of sulfurous acid. Chromium-nickel-steel is employed in construction of stoving equipment.	Monel metal is attacked by sulfurous acid. For anti-chloring purposes metals and alloys which resist the action of dilute hydrochloric and sulfuric acid are employed. Aluminum, chemical lead, and antimonial lead are used in construction of stoving equipment.	For the stoving of wool, chemical stoneware or acid-proof brickware are commonly used for construction purposes.
OXALIC ACID Available as crystalline substance of high purity soluble in water.	Employed in one-bath method of dyeing alizarine reds and other mordant colors, and to some extent in bleaching, for removal of rust stains, and in mordanting.	Oxalic acid rapidly attacks steel, wrought iron, and cast iron; but the high-silicon irons and chromium-nickel-steels withstand the action of all concentrations and temperatures (except boiling).	Nickel and Monel metal are highly resistant to all concentrations of this acid at room temperatures. Aluminum is not attacked by cold dilute oxalic acid, but corrosion increases with increase of concentration and temperature.	Wood is resistant to dilute solutions of oxalic acid. Glass- and rubber-lined equipment, enameled steel, and stoneware are resistant to dilute solutions of oxalic acid.

Chemical	Principal Uses	Corrosion-Resistant Properties		
		Ferrous Metals and Alloys	Non-Ferrous Metals and Alloys	Wood and Other Materials
CITRIC ACID Available as a crystalline product of high purity soluble in water.	Employed primarily in scrooping of silk.	Solutions of this acid rapidly attack steel, wrought iron and cast iron at all concentrations. Citric acid in all concentrations has no appreciable effect on high silicon irons and chromium-nickel steels.	Lead is severely corroded by concentrated solutions. Citric acid in all concentrations has no appreciable effect on aluminum, nickel, or Monel metal.	Wood is resistant to all concentrations of citric acid. Glass- and rubber-lined equipment, stoneware, and enameled steel are all resistant to the action of all concentrations of citric acid.
TARTARIC ACID Available as crystalline product of high purity soluble in water.	Employed in scrooping of silk and in mordanting of wool.	Similar in action to citric acid.	Similar in action to citric acid.	Similar in action to citric acid
SODIUM HYDROXIDE (Caustic Soda) Commercial strength Solid in rock or flake form of 98 to 99% purity. Solutions of 70°, 90°, and 100° Tw.	Employed extensively in scouring of vegetable fibers and mercerizing of cotton. Finds limited application in dyeing.	Commercial metals which withstand the caustic alkalis sufficiently to enable them to be used in equipment are steel, wrought iron, cast iron, and high-chromium and chromium-nickel steels. On account of the resistance of iron to caustic alkalis, the necessity for developing alkali-resisting alloys has not been so urgent as in the case of acid-resistant alloys. The high-silicon irons, while finding extensive application for acid resistance, are not recommended in general, for use with caustic alkalis except in dilute solution. The caustic alkali dissolves the silicon, leaving the metal in a highly porous and vulnerable condition.	Concentrated solutions of caustic soda rapidly attack metals and alloys, such as brass, zinc, aluminum, and lead. While copper offers good resistance to concentrated caustic soda solution both hot and cold, it is not suitable for such solutions when moving over its surface with high velocity. At ordinary room temperatures lead resists caustic soda solutions up to 15 to 20% (less than mercerizing strength), though the resistance is lowered by the presence of oxidizing agents. Metals and alloys which withstand its action sufficiently to enable them to be used in equipment are nickel, Monel metal, and aluminum-bronze. It is interesting to note that the presence of a small percentage of sodium silicate inhibits the action of caustic alkalis on aluminum.	With the exception of pine and cypress, even cold dilute caustic alkalis attack the different types of wood, rapidly causing softening and distortion and finally shreading and disintegration. Pine will withstand the action of caustic soda solution either hot or cold up to 5%, while cypress resists this concentration in the cold only, before softening commences. Both soft and hard rubber completely withstand corrosion by all concentrations of caustic alkalis and therefore find application as linings for wood tanks. Though there are numerous cases of concrete having withstood the action of dilute caustic alkalis, this condition is by no means infallible. Glass and enameled steel are not recommended for boiling caustic alkalis of any concentration.
AMMONIUM HYDROXIDE (Aqua Ammonia) Commercial strength 26°, containing approximately 35% of ammonia	Employed as a mild alkali in scouring wool and cellulose acetate, and for neutralizing textiles which have been subjected to acid treatment, such as carbonizing.	The action of all concentrations of ammonia water is entirely resisted by mild steel and high-chromium and nickel-chromium steels.	Aqua ammonia in all concentrations, and solutions of ammonium salts, attack copper and the acid-resisting bronzes, particularly in the presence of air. Nickel, nickel-chromium alloys, and Monel metal resist the action of ammonium hydroxide in all concentrations. Aluminum is practically unaffected by pure ammonia, though this substance rarely exists in the aqueous state, but generally contains small amounts of sodium salts which become causticized to liberate caustic soda which corrodes the metal. Lead and aluminum provide satisfactory immunity to attack by moist vapors.	Similar to sodium hydroxide, but may be stored at room temperature in glass or enameled steel.
SODIUM CARBONATE (Soda Ash, Sal Soda) POTASSIUM CARBONATE Commercial strength 98 to 99%.	Sodium carbonate is employed extensively in scouring vegetable, animal, and synthetic fibers, and in dyeing various classes of dyestuffs.——The application of potassium carbonate in confined largely to printing of vat colors.	These alkalis are entirely without action on iron or steel.	Concentrated solutions attack copper, brass, zinc, lead, and aluminum. Nickel itself is extremely resistant to alkali carbonate solutions, but in addition it confers this property on its alloys and, in Monel metal we find excellent resistance to all alkalis. The zinc coating on galvanized iron is rapidly corroded by solutions of the alkali carbonates.	Solutions of the alkali carbonates may be stored, hot or cold in maple, cypress, and fir in strengths up to 20%, though fir suffers a slight permanent contraction when in contact with a hot solution of sodium carbonate at this concentration. Any strength of sodium carbonate, hot or cold, may be stored in either soft or hard-rubber-lined tanks. Both glass and enameled steel are attacked slightly by hot concentrated solutions of alkali carbonates.
ALUMINUM CHLORIDE MAGNESIUM CHLORIDE	Employed for carbonizing of wool and finishing cotton.	When heated is decomposed, forming hydrochloric acid (which see).	Fittings of lead, Monel metal, and brass may be used in conjunction with cold solutions of aluminum chloride.	Cold solutions may be stored in wooden tanks. Hard rubber is used for equipment for transporting cold solutions.
SODIUM CHLORIDE (Common Salt) Available as crystalline product of high purity soluble in water.	Employed extensively in dyeing and a regenerating agent for treatment of zeolite water softeners.	Common salt is more or less deliquescent, and is therefore generally damp. In this condition it is corrosive to iron and steel. High-chromium and nickel-chromium steels, and high-silicon irons are not attacked by brine.	Copper, lead, nickel, and Monel metal, are not attacked by brine. Aluminum is attacked by brine solutions, corrosion increasing with concentration of the salt.	Both as a solid and in solutions is often stored in wooden containers. Sodium chloride solutions may be stored in concrete tanks in all concentrations and at all temperatures.
ZINC CHLORIDE Available in solid form and as concentrated solution of about 48% strength.	Employed in sizing as an antiseptic.	Galvanized cast iron is a satisfactory material for storing the solutions of zinc chloride. If plain cast iron be employed for this purpose, it becomes galvanized owing to the surface of the iron going into solution and depositing zinc electrochemically. When zinc chloride is boiled with water, hydrochloric acid is liberated so that suitable precautions must be taken.		Concentrated solutions of zinc chloride actually dissolve cellulose, so that wood is not recommended for the storage of this material. Wooden tanks lined with soft rubber may be used to store solutions of zinc chloride up to 50% concentration at temperatures below 100° F. Hard rubber will resist all concentrations at temperatures below 150° F. Glass and enameled steel withstand the action of all concentrations of zinc chloride.
SODIUM SULFIDE Commercial strengths 30 to 32% and 60 to 65%.	Employed chiefly as a reducing agent in dyeing sulfur colors.	Cold solutions of any concentration may be handled satisfactorily in iron, but hot solutions reduce its "life" considerably. However, iron is used extensively in equipment for sulfur dyeing.	Copper and brass are attacked by solutions of sodium sulfide either hot or cold, and therefore these metals are not recommended for sulfur dyeing. Vulcanite or Monel metal may be used for this purpose. Monel metal jig rollers should be of the drawn variety rather than soldered, as the solder, even silver solder, is attacked by sodium sulfide solutions and may cause dark stains on goods in process.	Asbestos, being soluble in solutions of sodium sulfide, is not recommended for gaskets, washers, etc., which are liable to be exposed to this corrosive agent. Asbestos may be replaced by rubber for this purpose. Enameled steel is not recommended for the handling of solutions of sodium sulfide.
SODIUM and CALCIUM HYPOCHLORITES (Chemic, Bleaching Powder, Eau de Javelle.)	Employed chiefly in bleaching vegetable and synthetic fibers and to a limited extent for chlorinating wool to render it unshrinkable.	Not only is contact with iron to be avoided in the preparation of sodium hypochlorite on account of the corrosion due to the chlorine, but the resultant ferric chloride is carried into the bleach liquor and precipitated as hydroxide, a constituent of rust. Such particles are capable of activating the bleach liquor to such an extent that the formation of oxycellulose in bleached cotton goods is a frequent result. For the preparation of calcium hypochlorite solution, iron tanks and agitators are commonly used, corrosion of the iron being prevented by the deposition of a coating of lime or calcium carbonate formed on the calcium hypochlorite solution. Cast-iron pipes are frequently used with this system.	Monel metal is not recommended for chemic of 1.5 to 1.75% available chlorine, particularly if the temperature of the liquor be somewhat elevated; but is used extensively for handling bleach liquors of lower concentrations. Lead and lead-lined pipes find application in the handling of bleach liquors.	For the preparation of small quantities of sodium hypochlorite wooden barrels are used, but have a short "life." Yellow pine, cypress and fir are the most resistant of the woods, though none of them have a long life in contact with hypochlorite liquors of high strength. In the preparation of sodium hypochlorite, reinforced concrete cisterns are giving satisfaction. Rubber, rubber-lined, and stoneware pipes and valves find application in the handling of bleach liquors. Hard-rubber valves give satisfactory service in such pipelines where there is danger of the alkaline solutions forming incrustations on the valve seats, etc.
LIQUID CHLORINE	Employed for preparation of sodium and calcium hypochlorites.	Chlorine gas is ordinarily handled by liquifying and storing it in steel cylinders as in the case of sulfur dioxide. Moist chlorine is corrosive to steel, wrought iron, and cast iron, and to lesser degree, the high-silicon irons and the high-chromium and nickel-chromium steels, although these are not necessarily recommended for resistance to moist chlorine.	In the preparation of solutions for bleaching it is recommended to conduct the chlorine through either heavy lead or rubber piping, and for the distribution of the chlorine throughout the alkaline medium heavy perforated lead piping is preferable. Whereas dry chlorine gas is reasonably inert and has no appreciable action on copper, moist chlorine (in which form it is usually encountered), is corrosive to copper, aluminum, Monel metal, and nickel.	Rubber piping may be employed to conduct chlorine gas.

emphasized. Salt water by reason of its large proportion of dissolved salts, principally sodium chloride, constitutes an all too efficient electrolyte in furthering the corrosion of commercial iron.

Another feature concerning the corrosion of metals is independent of the presence of dissimilar metals. A severe strain frequently has the effect of conferring enhanced electropositive properties on the strained portion of the metal and consequently will promote increased action in the presence of electrolytes. Hence in an ordinary nail or rivet it is possible for the head to corrode, leaving the shank practically untouched, in the presence of electrolytes. For similar reasons therefore it is desirable to employ welded, brazed, or soldered joints for exposure to corrosive liquids; and care should be taken in their heat treatment or annealing. Casting is the safest method of working metals which are to be exposed to the most strenuous of corrosive materials; but care in the cooling of the casting must be exercised or stray currents may set up differences of potention with consequent corrosion when in contact with electrolytes.

Corrosion-Resistant Alloys

The reason why Monel metal, consisting essentially of nickel and copper associated with minor quantities of manganese and silicon, is so resistant to most corrosive agents, though copper is electronegative and nickel electropositive, is that these two metals are perfectly miscible in all proportions; and therefore lose their identity and power to start preferential corrosion. Similarily in the case of stainless steels (essentially alloys of iron and chromium) by suitable heat treatment, the iron and chromium carbides dissolve in the iron-chronium alloy and so lose their identity.

Electrochemically deposited metals usually are not recommended as a protection against strongly corrosive materials, and the same applies to coatings deposited by spraying, galvanizing, sherardizing, calorizing, and coslettizing.

Corrosive Chemicals Used in Textile Mills

Among the corrosive chemicals commonly employed in textile mills the following may be considered as representative: sulfuric, hydrochloric, acetic, formic, nitric, sulfurous, oxalic, citric, and tartaric acids; alkalies, such as caustic soda, ammonia, quicklime, and soda ash; salts and miscellaneous materials each of which give rise to its own peculiar problem of corrosion, such as aluminum, magnesium, sodium, tin, and zinc chlorides, sodium sulfide, sodium and calcium hyprochlorites, and chlorine. The chemicals listed above are by no means all of the corrosive products used in textile mills, but many of the remainder may be classified with one or other in the list. For instance, the problems arising from the handling of soda ash will include those imposed by trisodium phosphate, sodium silicate, sodium sesquicarbonate, and the colloidal-alkaline detergents.

◆

Due to the wide variety of chemicals used in textile processing, it has been impossible in this one article to cover all products, but every effort has been made to be accurate and impartial in the presentation of the data available. Communications addressed to our technical department giving additional information which will assist in solving the corrosion problem involved by the use of various other chemicals or resistant materials will be welcomed, and when sufficient data are on hand, the information will be published in TEXTILE WORLD.

Other Factors Must Be Weighed

In the accompanying table data are given relating to the reactions of corrosive agents and structural materials in common use in textile mills. There are so many determining factors, including those of temperature, purity or reagents, mobility of corrosive agents, presence of air, etc., that complete information cannot be included in every case. For instance, the presence of a small amount of common salt in sulfuric acid materially increases its powers of corrosion while the addition of a small percentage of sodium sulfate to acetic acid decreases the latter's corrosive tendenceis.

In selecting corrosion-resisting materials it will be found sometimes that there are limitations to be considered, although these are often outweighed by the advantages. For example, chemical stoneware possesses low mechanical strength, poor heat-transfer, and is of relatively high density. The high-silicon irons, while generally of excellent resistant resistance to corrosive agents, are brittle and only available in the cast form. Hard rubber is generally somewhat brittle and is not recommended for temperatures in excess of 150° F. Soft rubber is slightly more expensive than the hard variety and has a tendency to age. Glass and enamel-lined equipment, while possessing the advantage of light weight, is prone to chipping and the enameled portion is susceptible to surface-line attack. Wood, though one of the cheapest materials, is highly absorbent, which fact renders it unsuitable for use with many textile chemicals in concentrated solution. It is apparent, therefore, that the advantages and limitations must be balanced to insure choice of the best possible product for each particular application.

Building Materials

There still remain the problems of suitable buildings and building materials in which to house all these corrosives. It is generally accepted that buildings designed for this type of work should be of slow-burning construction, consisting of brick walls, concrete foundations, trenches, sewers, etc.; and wooden roofs.

Because of the liability of steam condensing and dropping on materials in process causing rust spots, the exposure of steel and iron should be avoided as far as possible. There are many water- and acid-proof paints suitable for coating steel work to withstand corrosion. Another method of overcoming the corrosion of steel joints, girders, etc., is to protect them by means of lead aprons, covering the top flange, and turned out at the lower edges so that the acid etc. will drip clear of the bottom flange.

Hoods and vents over machines should be constructed of wood chemically-treated or lead-lined, or of other corrosion-resisting materials. Concrete floors topped with mastic, a bituminous product, prove very satisfactory when exposed to acid conditions, and in addition are dustless and stand up well under heavy trucking.

Thomas B. Hill, president, Silk Association and a leader in the association's new plans

Extensive Survey on Sales and Production

Started by Silk Association

AN EXTENSIVE survey of the broadsilk industry, covering all aspects of production and distribution, the results of which will be used to draft an up-to-date and constructive program for the industry, has been initiated by the Silk Association of America, Inc. The broader lines of the project were explained to TEXTILE WORLD, Monday, by Thomas B. Hill, president of the Silk Association, and president also of C. K. Eagle & Co., broadsilk manufacturers. Mr. Hill is one of the prime movers in the plan. With him, on the preliminary committee are: B. Edmund David, who is chairman of the committee, Paul Hyde Bonner, of Stehlisilks, Inc., and Ewald Schniewind. Fred Schibley, well known textile expert, will serve as advisory counsel.

The survey has been under consideration by executives of the Silk Association for some months, and it is felt that the time now is ripe to undertake the task. One most important element in gathering the desired statistics regarding distribution, inventories and sales, is the cooperation of the individual firms, and it is believed that, now, in view of the present depression, weavers will be more responsive than they might otherwise be, to a request for the submission of confidential figures.

Will Study Obsolescence

The survey will cover the machinery situation from all angles; figures on total looms and spindles and the actual condition of the equipment will be gathered. Especial effort will be made to get a true picture of the obsolescence aspect. Marketing methods and markets will be studied, and also the possibilities of developing new markets. Cost accounting and budgetary control are other branches to receive attention.

Mr. Hill said it was too early to talk specifically about the operations of the survey; but he emphasized that no labor would be spared to make it as truly representative of the industry as possible. It was reported elsewhere in the broadsilk market that the cooperation of outside organizations, familiar with certain aspects, may be solicited.

Bring Health to the Industry

"The thought behind the survey," Mr. Hill said, "is to bring health to the silk industry, by enabling the manufacturers to base their production and sales policies on actual facts. We hope to furnish the industry with statistics that will enable all to tally output with demand, and to eliminate excess production as far as possible. It is essential, of course, that mills cooperate with us in making the survey, and we feel sure we will get this support, as there is a strong feeling in the industry that something of this sort should be undertaken."

The statistics, when assembled, will be minutely studied, and will serve as basis for a platform that the committee will submit to the industry through the Silk Association. The association plans an active educational campaign to instruct the manufacturers on the need for revising their policies in line with that new program.

Committee Now at Work

The committee has begun work already, and plans a series of hearings, to which representatives of all divisions will be invited, with the aim of securing their cooperation. The precise methods to be used in the different divisions of the survey will be decided as the work progresses. In considering the merchandising problem special attention will be devoted to styling and to intertrade cooperation.

Mr. Hill could not estimate how long the survey might take, but he hoped that it would be far enough advanced by the time the Japanese silk popularization drive starts, to prove valuable to that undertaking. The two events really should complement each other, as the data sought by the Silk Association committee, especially the statistics bearing on merchandising and new markets, could materially help the Japanese campaign. As previously announced, that drive has been tentatively set to start in July.

Wool Fabric Men *Consider Night Work Elimination and Seek New Head for Institute*

ELIMINATION of night work by women and minors in the textile industry received added impetus when directors of the Wool Institute, Inc., at a meeting held April 29 in New York passed a resolution favoring such elimination by the wool manufacturing branch of the industry. It was decided that the Institute would distribute a ballot to all wool manufacturers upon which individual mills will signify approval or disapproval of the night work modification which is to be effective by July 31.

The directors accepted the resignation of Bart Murray, which had been previously tendered to the chairman as reported last week. A committee, consisting of F. W. Tipper, Louis Bachman and E. E. Whitman, was appointed for the purpose of making recommendation of a successor to Mr. Murray as executive director of the Institute. Mr. Murray will join the organization of J. P. Stevens & Co. on May 11.

Action on these two important questions was taken by eleven members of the board, the following being present: Messrs. Adam, Bachman, Hird, Hobbs, Hutcheson, Mitchell, Nixon, Stevens, Stursberg and Whitman.

At a meeting of the board of directors, Eben E. Whitman, presented the following statement:

Unequal conditions of employment both as to the hours of labor, and the night employment of women and of minors caused by the inequalities of our State laws, have been the primary cause of the breakdown of the textile industry. In the cotton manufacturing department of the industry, the mills have co-operated to equalize more nearly conditions of employment. Their action has resulted in a great improvement in the statistical position of that branch.

If the same spirit to co-operate exists among the mills of the woolen and worsted department of the industry, there is no reason why they cannot accomplish the same results. If these unequal conditions of employment are permitted to exist in wool manufacturing, they will continue to undermine its foundation to a greater and greater extent as time goes on. They will continue to impede the development of the industry under favorable business conditions, and to increase progressively its manufacturing losses in times of depression.

We have in The Wool Institute, the machinery with which to formulate these standards of self-government. It is entirely in the hands of the mill executives to decide whether they want to utilize this machinery to stabilize conditions.

A copy of the statement which was read at the Institute meeting of Nov. 19, 1930, bearing on the subject of the equalization of operating conditions in all sections of the Industry was sent to practically every mill shortly after that meeting. The plan of action which was proposed apparently met with favorable response. This was some five months ago, but until recently no further action has been taken.

On April 17 at a meeting of the executive committee, it was pointed out that the Declaration of Policy set forth in the above statement, involved two questions: the first, the question of the elimination of women and minors from night employment; the second, the question of a maximum 48-hour week for women and minors in the industry. The committee decided to recommend at this time the first question only, and the following resolution was unanimously voted:—

RESOLVED: That the executive committee of the Wool Institute recommend to the board of directors, that recommendation be made to the wool manufacturing industry to eliminate in its mills as soon as possible and not later than July 1, 1931, the employment at night of women and minors.

It was decided that as a preliminary step toward the promotion of the plan, a ballot should be presented to the entire industry on the question of principle that night employment of women and minors should be eliminated, and that later a detailed concrete plan should be presented for signature so that each mill would be given an opportunity to declare what its policy would be. Of necessity this concrete plan must define the word "minor," and must also specify the period to be considered as the "night" period. In reviewing these questions, consideration should be given to the position taken by the cotton manufacturing branch of the industry. It must be borne in mind that there is a direct relationship between all classes of textile labor, that there is a constant migration from one branch of the industry to another.

Bart Murray, former director of Wool Institute, who goes with J. P. Stevens & Co. on May 11

As to the definition of the word "minor," the cotton manufacturing industry finally decided that a person under 18 years of age should be considered a minor. It has developed that there is a general feeling that women and girls should not be permitted to work at night; whereas many feel that boys between the ages of 16 to 18 years of age can properly be employed in the daytime, it was felt by the cotton industry that males under 18 years of age should not be employed at night.

As to the definition of the word "night," the directors of The Cotton-Textile Institute considered the period from 9 p. m. to 6 a. m. It was pointed out that a day period of 15 hours would permit of two 7½-hour shifts, and as there was an earnest desire to place the industry on a single shift basis, it was decided to shorten the day period by lengthening the night period from 7 p. m. to 6 a. m.

In view of the position of the wool industry, it would seem best to consider the night period for wool manufacture to be 6 p. m. to 6 a. m.

The recommendation of the executive committee was unanimously adopted by the board of directors, with modification of the date at which the plan should become operative to July 31, 1931.

Nine-Meter Sizings

as a Measurement of Evenness

By Warren P. Seem

Julius Kayser & Co.

◆ *Investigators are still seeking a thoroughly satisfactory method for measuring the evenness of a strand of fibers. In this article Mr. Seem describes a simple and accurate method which eliminates the human equation. It was primarily developed for raw and thrown silk, but it is thoroughly applicable, Mr. Seem believes, to spun silk, rayon, and cotton and to comparisons between different textile materials.*

OUR studies on 9-meter sizings as a measurement of evenness on raw silk indicate that the following has been accomplished: (1) A simple and accurate measurement for evenness has been developed that is free from the human equation. (2) It detects and scores the short lengths of very fine and very coarse threads that cause serious defects in all products. This enables the buyer, if the details are given, to analyze a composite classification report and select the silk most suitable for his product, as far as evenness is concerned, without further tests. (3) It measures all sizes of single-thread raw silk from 9/11 to 42 denier, and any number of multiple threads; therefore it can be used for measuring the evenness of thrown silk. (4) It measures the evenness of all sizes of rayon, cotton, and spun silk, and makes possible comparisons on evenness between different textile fibers.

Method of Test

The test consists of sampling 40 skeins according to the rules of the Raw Silk Classification Committee. Four seriplane boards, each equipped with a set of 50 lifting cams on one side of the board, are wound in the regular way; that is, two panels from each skein, 40 panels from 20 skeins. See Fig. 1.

As the threads on both sides of board are not disturbed, before the cams are raised, the boards can be used for evenness and cleanness observations. Afterwards five nine-meter skeins are raised from each panel, or a total of 200 skeins from the four boards. Four-hundred skeins are drawn and weighed from the 40 skeins, representing a 10-bale lot.

The 200-skein sets are cut off the board, tied into a bow, and weighed on a torsion balance graduated in milligrams. See Fig. 2. As one milligram is 1/50 of the denier weight unit and nine meters is 1/50 of the denier length unit, the weighing of nine meters in milligrams also gives the denier size.

Each 200-skein weighing is scored on the accompanying form for 9-meter sizings. Column 1 represents the actual weight to the nearest milligrams of nine meters and is therefore equivalent to the size (i.e., deniers per 450 meters). Column 2 represents the number of skeins of each size. Column 3 consists of the product of column 1 multiplied by column 2, or the total denier of each and all sizes. Column 4 gives the diameter of the thread of a given size expressed to the nearest micron; see Conversion Table I for the diameter of other sizes. Column 5 represents the deviation in diameter, expressed in microns, squared; this is found by subtracting the diameter of each size from the average diameter at 14 denier and multiplying the deviation thus found by itself.

The example given under the form for 9-meter sizings shows the average size as 13.87. Using the nearest whole number, or size 14, the diameter in microns is 55. Take size 10 deniers as an example. Its diameter is 47 microns. This deviates 8 microns from 55 microns, the average 14. This squared is 8×8, or 64.

Column 6 represents the product of column 2 multiplied by column 5, or the total squared microns for each and the sum for all sizes.

To find the evenness percentage, multiply the 200 test skeins by the average microns, as shown under the form, or $200 \times 55 = 11{,}000$ microns. Then take the total

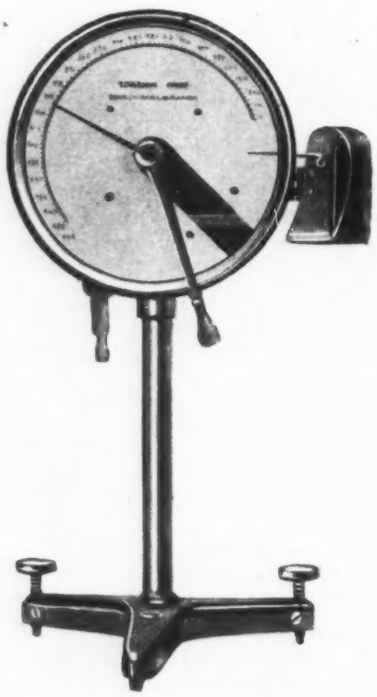


Fig. 2. Torsion balance

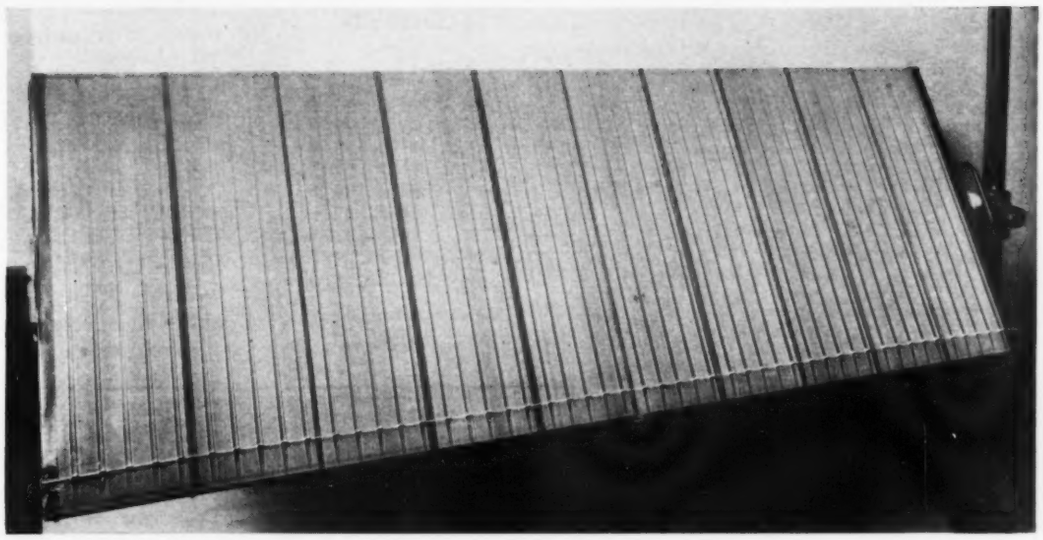


Fig. 1. Seriplane board

FORM—NINE-METER SIZINGS

Size	Number Skeins	(1x2) Milligrams	Diameter in Microns	Deviation of Diameter Squared	(2x5) Total Squared Deviation Each Size
6	...	...	36	..	...
7	...	...	39	..	...
8	...	...	42	..	...
9	...	...	44	..	...
10	2	20	47	64	128
11	8	88	49	36	288
12	30	360	51	16	480
13	38	494	53	4	152
14	46	644	55*	..	...
15	46	690	57	4	184
16	29	464	59	16	464
17	1	17	61	36	36
18	...	...	63	..	...
19	...	...	64	..	...
20	...	...	66	..	...
21	...	...	68	..	...
22	...	...	70	..	...
Sum	200	2,777	..	..	1,732
Avg.		13.87 deniers.			

The average size $\frac{2,777}{200} = 13.87$ deniers.

Total microns (use nearest whole number to average size, 14 denier)—55 microns × 200 skeins = 11,000 microns.
Unevenness—Total squared deviation on 1,732 divided by total microns or

$$\frac{1,732 \times 100}{11,000} = 15.7\%. \quad 100\% - 15.7\% = 84.3\% \text{ Evenness}$$

deviation (1,732) and divide by 11,000, which gives 15.7%, which is the unevenness of the thread in per cent. (Inasmuch as 9 meters, the length of the test skein, is a constant in both numerator and denominator, it disappears.) The evenness is found by subtracting the unevenness 15.7% from 100, or 84.3%.

The evaluation in per cent is based on a simplified method of the standard mathematical way of expressing the deviation from the average, known as the "theory of least squares." This has extensive use in "Physical Science." Mr. T. Higo gives an exhaustive treatise on it in the minutes of the First and Second American-Japanese Technical Conference, 1928-1929.

Conversion to Microns

Table I for conversion of deniers to microns is based on Rosenzweig's findings given in "Serivalor," and gives the diameter of the silk threads as determined by calculation from the specific gravity of raw silk. He finds that "the diameter of homogeneous cylindrical bodies is proportional to the square root of their weight. However, as the raw thread is not homogeneous, but a bundle of almost cylindrical bodies, allowance was made in computing the table."

L. Vignon, in the volumes 1886, 1887, and 1888 of the annuals of the "Laboratory studies of Silk, Lyons," gives also extensive measurements of the diameter of

TABLE I—CONVERSION OF DENIERS TO MICRONS

Deniers	Microns	Deniers	Microns	Deniers	Microns	Deniers	Microns
8	42	51	106	94	144	135	173
9	44	52	107	95	145	136	173
10	47	53	108	96	146	137	174
11	49	54	109	97	146	138	174
12	51	55	110	98	147	139	175
13	53	56	111	99	148	140	176
14	55	57	112	100	149	141	176
15	57	58	113	101	150	142	177
16	59	59	114	102	150	143	177
17	61	60	115	103	151	144	178
18	63	61	116	104	151	145	179
19	64	62	117	105	152	146	179
20	66	63	118	106	153	147	180
21	68	64	119	107	154	148	181
22	70	65	120	108	154	149	181
23	71	66	121	109	155	150	182
24	73	67	122	110	156	151	182
25	74	68	122	111	157	152	183
26	76	69	124	112	157	153	183
27	77	70	124	113	158	154	184
28	79	71	125	114	158	155	185
29	80	72	126	115	159	156	185
30	81	73	127	116	160	157	186
31	83	74	128	117	161	158	187
32	84	75	128	118	161	159	187
33	85	76	130	119	162	160	188
34	86	77	130	120	163	161	189
35	87	78	131	121	163	162	189
36	89	79	132	122	164	163	190
37	90	80	133	123	165	164	190
38	91	81	134	124	165	165	191
39	92	82	135	125	166	166	191
40	93	83	135	126	167	167	192
41	94	84	136	127	167	168	193
42	95	85	137	128	168	169	193
43	96	86	138	129	169	170	194
44	98	87	139	130	169	171	194
45	99	88	139	131	170	172	195
46	100	89	140	132	171	173	195
47	101	90	141	133	171	174	196
48	102	91	142	134	172	175	197
49	103	92	142				
50	104	93	143				

TABLE II
EVENNESS TO BE EXPECTED ON MULTIPLE THREAD

Raw Silk		Multiple Threads								
Grade	%	2	3	4	5	6	7	8	9	10
.....	90	93.1	94.1	95.1	95.6	96.	96.3	96.5	96.7	96.9
.....	85	89.6	91.3	92.6	93.6	94.	94.4	94.8	95.1	95.3
.....	80	86.1	88 4	90.1	91.1	91.9	92.5	93.	93.4	93.8
.....	75	82.6	85.5	87.6	89.	89.9	90.7	91.2	91.7	92.2
.....	70	79.1	82.6	85.1	86.8	87.9	88.8	89.5	90.2	90.7
.....	65	75.8	79.7	82.7	84.5	85.9	86.9	87.7	88.5	89.1
.....	60	72.3	76.9	80.2	82.3	83.8	85.	86.	86.7	87.5
.....	55	68.7	74.	77.7	80.1	81.8	83.2	84.2	85.2	85.9
.....	50	64.9	70.8	75.	77.7	79.6	81.1	82.3	83.4	84.2

To study the relative values of Table II, or the evenness to be expected from raw silk of various percentages of evenness, 9 meter sizings were made on Grade A Rayon on 45 and 135 deniers. These tests showed; 45 denier, 97.4% evenness; 135 denier, 99.1% evenness.

Table II shows that raw silk of 90% evenness averages 96.9% on 10 thread and does not even up to that of 45-denier rayon. According to this method of measurement, 90% raw silk is the most even silk that can possibly be reeled. Grand XX Special Selected offered this season is found in the 75% and 80% class.

By comparing the evenness to be expected on various threads it will be seen why a larger percentage of seconds due to unevenness must be expected on five-thread and under.

the fiber which closely verify Rosenzweig's measurements. On sizes over twenty deniers, the diameters given in the table were calculated from the rule that theoretically the denier count or weight is proportional to the area of the cross-section, which in turn is proportional to the square of the diameter. If, for example, an 8-denier thread is 42 microns in diameter, the diameter of a 30-denier thread is 81.3 microns, thus:

$$8 : 30 : : (42 \times 42) : X^2$$
$$X = 81.3$$

The evaluation of the evenness grades is based on a range of 5% on raw silk which, according to Table II, gives a range of about 3% on multiple threads.

In building the grades, it was aimed to prevent any apparent difference in the level of evenness of the product when the best or worst within the raw-silk grade is used. As the range on multiple threads is about one-third less than that of the same evenness grade of raw silk, it indicates that the evening-up factor gives the desired evenness level in the product when the range is limited to 5%. Rosenzweig, in "Serivalor," pages 51 to 69, gives ten evenness grades based on 18-meter length. These tables calculated by the method used on the form for 9-meter sizings range from 7 to 11%. His four lowest grades are rarely found in the American market. Extensive studies on sheer knit fabric show that when the range exceeds 5% the product indicates an apparent change in the level of evenness.

To prove the accuracy of the method of calculating the percentage of evenness on the raw silk or that of squaring the deviation of each size, the evening up on multiple threads was calculated by using the total deviation in each grade, thus:

Fourteen deniers was assumed as the average size, which, according to Table I, is 55 microns. Then 200 skeins $\times$ 55 microns = 11,000 microns. A 90% silk is 10% uneven and has a deviation of 1/10 of 11,000 microns, or 1,100 microns. A two-thread would be twice 14 deniers in size, or 28 deniers; and would measure according to Table I, 79 microns. 79 microns $\times$ 200 skeins = 15,800 microns.

The unevenness on two threads is found as follows:

$$\frac{1{,}100 \times 100}{15{,}800} = 6.9\% \text{ unevenness.}$$

The evenness is found by subtracting 6.9% from 100, or 93.1%, as shown in Table II.

Table II is compiled, by the above rule, to show the evenness that may be expected on multiple threads from silk of different evenness grades. This table was checked by throwing the raw silk used in 150 tests into multiple threads and weighing in 9 meters. The variation averages less than 1%, which indicates that for all practical purposes the table computed from the deviation in the raw will suffice.

Studies are, however, continued to determine the actual range and see whether a larger number of actual results will give evidence that a correction factor is required. The present indications are that, if the sizing skeins are weighed and calculated in fractions of a denier, the difference is negligible.

Nine meters was adopted as the length of the sizing skeins as it is the only length indicating all the very fine and very coarse threads and the only size giving direct relations between the percentages of single and multiple threads.

The Raw Silk Classification Committee classifies very coarse and very fine as threads 50% under and over average size. Let us take for example 9 meters as representing the average length of very coarse and very fine threads and 25 deniers as representing an average very coarse thread. Such a 9-meter sizing would deviate 79% from an assumed average of 14 deniers.

TABLE III

Showing deviation in weight on fractional sizings due to 9 meters of 25 deniers, assuming rest of skeins are 14 deniers.

Meters	Fractional Sizings	Deviation %	Deviation Size (Denier)
9	1/50	79	11
18	1/25	39.2	5.5
28⅛	1/16	25.1	3.5
56¼	1/8	12.5	1.75
112½	1/4	6.2	0.86
225	1/2	3.1	0.43
450	Standard	1.5	0.15

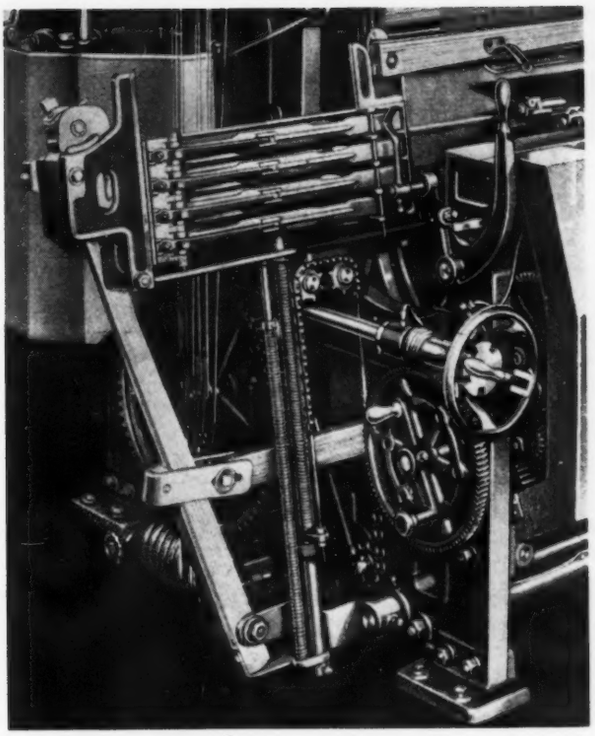
By studying Table III it will be observed that a 25-denier thread deviates 79% from an average 14-denier size; but if an 18-meter sizing is used, the deviation is only 39% and is classified only as a coarse thread, whereas it is very coarse.

The study also showed that it is impossible to detect any short lengths of very fine sizes if sizings over 9 meters are used.

(To be continued)

Reducing Picker-Stick Breakage *in Woolen and Worsted Mills*

By Benjamin F. Hayes



A section of 24 looms should not require on the average more than four new picker sticks per week

ON single-shuttle looms the picker is fastened to the base of the picker stick, and the stick often lasts for many years; but sticks which are used with drop-box or reversible pickers have brief periods of life. These periods, however, are often shorter than necessary, and this article will attempt to explain why.

It is a good plan to date all picker sticks as they are placed on the loom, for it is only in this way that we can learn how they are holding up. A section of 24 looms should not use on the average more than four sticks per week, but of course the actual figure is influenced by the speed of the looms and the grade of work. The best service I ever had from a picker stick was slightly more than eighteen months. This stick was on a loom running mostly on even-pick work at a speed of about 125 picks per minute. The weaver was careful and had been instructed how to take care of her sticks. The length of service which this particular stick afforded was much greater than the average which even that loom permitted.

The fixer who dates his picker sticks will soon observe that some weavers break a larger number than others. Many weavers are loath to admit that they are at fault. I remember one of this type who had been weaving for many years. She thought she knew how to take good care of her looms and was very conscientious about keeping them clean and other matters; but her picker-stick breakage was too high. I explained to her that she should draw the stick up against the picker and place one or two drops of oil so that both the picker and the stick would be lubricated. She refused to do this, saying that in her more than twenty years of experience she had never found that necessary. After I had spoken to her several times about it, she accused me of using up poor sticks on her looms. As a matter of fact, this accusation was justified, because I had been doing that very thing. "When you learn how to take care of your picker sticks," I said, "I shall give you just as good as I give the others."

After relieving her feelings by calling me impudent, she oiled the sticks as instructed, and the beneficial results were soon noted. This weaver had been breaking at least six times as many picker sticks as was necessary because no one had mustered the nerve to insist upon her oiling them. Many hundreds of picker sticks would have been saved if she had met an impudent loomfixer twenty years before.

Another personal experience may serve to throw some light on this subject. I had started on a new job as the sole fixer in a small mill operating 30 looms. About noontime on the first day I noticed that my helper had replaced six picker sticks. I was examining the six broken sticks when he approached me. "Bum sticks," he remarked laconically.

I showed him that not one of the six was worn out. True, they were broken and could not be used again, but they had all been broken by being trapped in the shuttle box. I showed him how to connect the sweep stick with the picker-stick, so that, if at any time the shuttle box trapped the picker, the sweep-strap connection would slip rather than break the picker stick. I personally handled all picker-stick replacements for a few days, instructing him how to couple up the sweep-strap connections so as to obtain the desired amount of movement of the picker-stick, and how to adjust the timing of the boxes and the eccentric motion. Improper adjustments of this important eccentric motion almost always are the cause of the pickers being caught in the shuttle boxes and breaking the sticks. Many times this condition smashes out a large amount of warp.

The first week I counted up the number of broken picker sticks and found that there were thirty-six. "Not so bad," said my helper. "Just thirty-two too many," I said. But it was many weeks before we got down to four sticks per week.

It should now be in order to consider what it is that causes the picker sticks to wear *(Continued on page 111)*

Trends

in Full-Fashioned Gauge and Sections per Machine

◆ *Since the report issued by the Industrial Research Department of the University of Pennsylvania on 1930 installations of full-fashioned hosiery machinery was summarized in the* TEXTILE WORLD *of March 21, much interest has been shown in the conclusions drawn from the investigation. In order that the basis for these conclusions may be more fully understood and that readers may be able to make deductions of their own if they so desire, we publish herewith the tables and charts developed under the direction of Dr. George W. Taylor of the university, together with some of his comments regarding them.*—Editor

FULL-FASHIONED hosiery machine installations in 1930 were considerably less than half those in 1929. Decreased machinery construction became quite pronounced during the last six months of 1930. Considered with the scrapping of equipment that occurred in 1930, the decreased construction makes it appear that the potential capacity of the industry to produce hosiery was not materially increased during the past year.

Most of the machinery constructed during 1930 consisted of approximately two leggers for each footer. This indicates that the double-shift method of operation is in mind when the manufacturer of hosiery purchases his equipment. If single shift were contemplated, a proper balance of production would necessitate approximately three leggers for each footer.

Table 1 indicates that almost one-half of the new machinery installed in 1930 was the 45-gauge type, with 42-gauge ranking next in importance, and representing over one-third of the total. In the past year a small percentage of new machines was of gauges "in the 50's," but a surprisingly large percentage of 48-gauge machines was installed. As a percentage of total construction, 48-gauge equipment almost doubled in importance as compared to 1929, although this increase merely brought this type of machine to the same relative importance it had as a part of the 1928 production.

Chart I shows vividly the changes that have occurred in the relative proportions of each year's output represented by the principal gauges. The data for this chart have been arranged to show each year's production as 100%. It must be remembered that a different number of machines was produced each year.

The present trends are somewhat confusing. After a decrease in importance in 1929, the 48-gauge machine "came back" in 1930. Certainly the 42-gauge machine has continued its tendency to become a smaller percentage of the yearly output. It is difficult, however, to decide whether or not the 48-gauge machine is on the ascendency; it is also impossible to say whether or not the 45-gauge machine has started a long-time decrease, or has been temporarily halted, as was true of the 1924 decrease in the output of 42-gauge machines. From the history of the rise and decline of 39- and 42-gauge machines, as a percentage of yearly output, it will be noted that both types of machines reached their peaks when they were almost 80% of total yearly production. If their history is to be repeated, then 45-gauge machines should become increasingly important in 1931. We should watch with interest any tendency of 48-gauge machines to increase as a percentage of yearly production, and we may expect that new installations of 42-gauge equipment will become less important.

At present, the bulk of the full-fashioned hosiery production is probably made on 42- and 45-gauge machines; future installations will probably be mainly of 45-gauge machines, with a possible growing importance of the 48-gauge type.

TABLE 1. 1930 INSTALLATIONS BY GAUGE

Gauge	Percentage of Production and Importations			Ratio of Leggers
	All Machines	Leggers	Footers	to Footers
33	.2	.2	.2	2.0
39	.1	....	.4	....
42	35.9	34.1	39.4	1.7
45	49.8	50.8	47.6	2.0
48	10.5	11.1	9.3	2.3
51	2.2	2.3	2.2	2.0
54	1.2	1.4	.9	3.0
57	.1	.1	....	....
Total	100.0	100.0	100.0	1.9

The preceding discussion of trends in gauges has not considered the effect of each year's construction of machines upon the total machinery supply. Unless extensive scrapping has taken place, of which we have no record, the 42-gauge machine is by far the most numerous type in place, with the 39-gauge type representing a considerable number.

Leggers produced in 1930 were mainly of the 24- and 20-section types; the former being of greater importance. (See Table 2). While the 20- and 24-section machines were important in 1930 footer construction, the 28-section footer is becoming of increasing importance. In order to show the trends in the percentage of yearly output represented by certain sections per machine, Chart II has been prepared. It shows data for leggers and footers combined, although we must realize that footers consist frequently of a greater number of sections than do leggers. However, leggers are more numerous than footers.

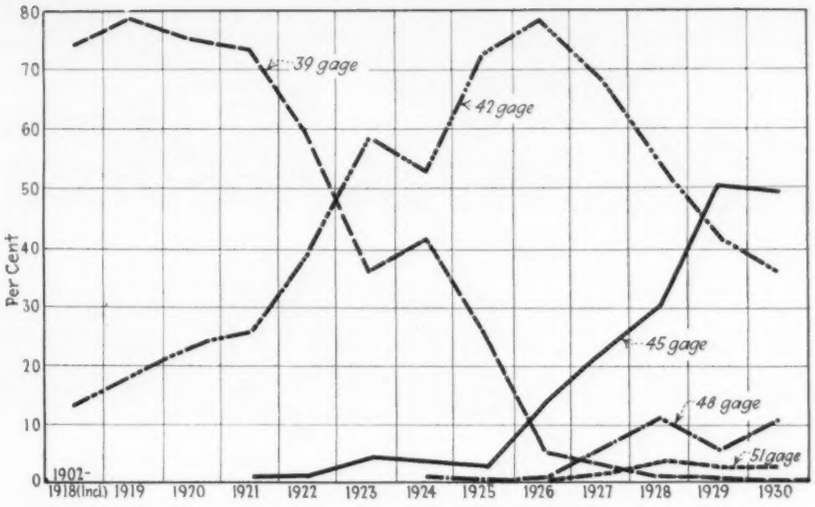


Chart 1. Percentage of yearly production of full-fashioned hosiery knitting machines by gauge 1902-1930

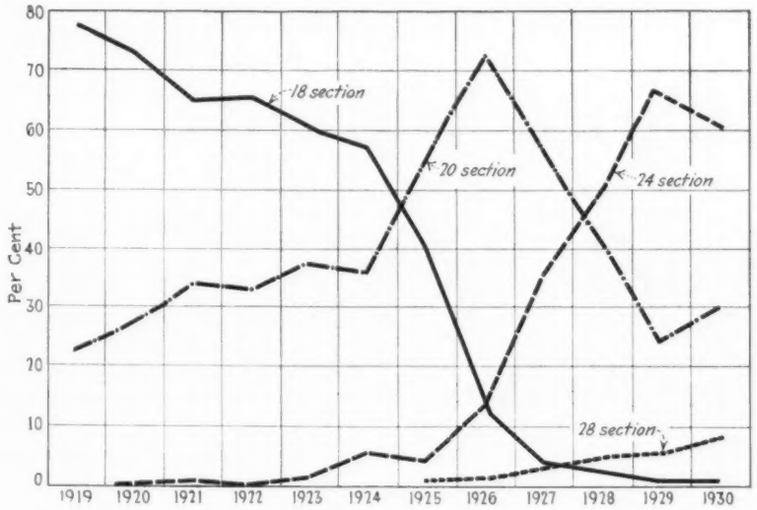


Chart 2. Percentage of yearly production of full-fashioned hosiery knitting machines by sections per machine 1919-1930

The Trend

The present trend in sections is difficult to ascertain. In 1930, the 20-section machine increased as a percentage of total machine output for the first time since 1926. Conversely the 24-section machine decreased its importance in the total output for the first time since 1925. On the other hand, during the past year the 28-section type continued its steady advance.

Of all machines produced since 1902, 23.2% have been 18-section machines, 42.5% have had 20 sections per machine, while 30% have been the 24-section type. Due to the recent development of 28-section machines, they represent but 2.8% of all machines produced since 1902.

The most prevalent kind of machine constructed during the past year was the 45-gauge, 24-section type. The 42-gauge, 24-section legger was also important, as well as the 42-gauge, 20- and 24-section footer. Numerous other types were produced, particularly in the case of footers, but these models mentioned accounted for a large proportion of the equipment.

Table 3 indicates the percentage of total machinery production in 1930 represented by particular types of machines.

The rapid changes make it appear advisable for the industry to undertake a census of knitting machines now in operation.

Only in this way can we secure data relative to the results of installations on the one hand and scrappings on the other.

TABLE 2. 1930 INSTALLATIONS BY SECTION

Sections per Machine	Percentage of Production and Importations		
	All Machines	Leggers	Footers
10	.1	....	.2
18	.1	.1	....
20	29.4	29.5	29.4
22	.9	.9	.9
24	61.0	69.5	44.6
28	7.6	....	22.1
30	.9	....	2.8
Total	100.0	100.0	100.0

TABLE 3. 1930 INSTALLATIONS BY GAUGE AND SECTION

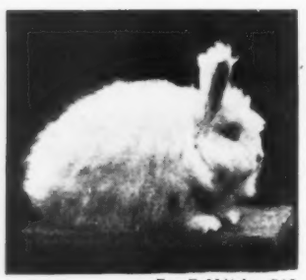
Type of Gauge	Leggers Section	Percentage of Total Legger Installations	Type of Gauge	Footers Section	Percentage of Total 1930 Footer Installations
45	24	36.1	45	24	25.3
42	24	26.4	42	20	15.8
45	20	14.7	42	24	14.7
42	20	7.2	45	28	11.9
48	24	5.9	42	28	8.9
48	20	5.2	45	20	8.0
Others	..	4.5	48	20	4.8
..	..	....	48	24	2.6
..	..	....	45	30	2.2
..	..	....	Others	..	5.8
Total		100.0	..	..	100.0

Oregon Worsted Mills, Portland, Ore., where Angora rabbit wool yarn is being finished by Pendleton Woolen Mills.

Washougal, Wash., unit of Pendleton, Ore., Woolen Mills organization with headquarters in Portland. Angora rabbit wool is carded and spun here.

Spinning Angora Rabbit Wool

in the Northwest



Ray Rabbitries, Ltd.
Angora rabbit

PROBLEMS of spinning and finishing of Angora rabbit wool, undertaken last fall by the Oregon Worsted Mills in Portland and the Pendleton (Oregon) Woolen Mills, had to be met with careful experimentation for almost a year before the product was placed on the market. These problems revolved around the following characteristics of rabbit wool: fineness, lightness, tendency to mat when washed and dyed, ability to absorb more dye than sheep's wool, smoothness of fibers as compared with scaled surface of sheep's wool, and greater tensile strength in individual fibers than sheep's wool.

Manufacture of this material as a sideline to the regular woolen production of these Oregon mills, had its genesis in the action of the English rabbit growers' association more than a year ago. English mills had agreed to purchase only from domestic growers and American rabbit wool producers found themselves with a curtailed market. French and German mills had not been in need of wool outside of their own countries previously, and were not available as purchasers after the English mills adopted the "buy-at-home-exclusively" policy. The Pacific Northwest section of the United States has constituted a prominent producing section for rabbit wool, and several of its growers took the initiative to point out the situation and the need for a domestic market to Clarence M. Bishop and Roy T. Bishop, managers respectively of the Pendleton Woolen Mills and the Oregon Worsted Mills.

The decision to try this new field meant adjustment of existing machinery to meet the above-mentioned characteristics. The Washougal (Wash.) plant of the Pendleton mills organization has thus far handled carding and spinning of rabbit wool in cooperation with the Oregon Worsted, which handles the finishing processes in the manufacture of the yarn.

Cards and mules are both adjusted for fineness and lightness. Number of carding teeth and ratio of gears of both cards and mules found successful on the existing woolen machinery are details which had to be adapted to the new fiber. Its lightness involved a necessary corrective to the tendency of flying in carding and spinning.

Due to the cellular construction of the fibers, rabbit wool yarn was found to absorb more dye from solution than sheep's wool. This increased absorption ranges from twice the amount for blues to slightly more than three times for yellows. The original nine colors, offered when the yarn was marketed in September, 1930, have since been increased as needs required. Danger of matting in wash or dye solutions demands utmost care on the part of the washer and dyer. Agitation in the dye bath is reduced to the minimum.

Tension on the yarn in balling for retail sale is much less than on sheep's wool. Though individual rabbit fibers have greater tensile strength than wool, their smoothness lessens adhering qualities and the tensile strength of the yarn. The added fact that fluffiness is a desired quality in rabbit wool yarn renders comparative looseness in balling desirable.

"Pengora," a composite trade name derived from the name of the mills and the name of the rabbits growing this fleece, is marketed in ½-ounce balls in quarter-pound boxes. Thus far the yarn has been made for sale but experimental manufacture of various articles such as undergarments, etc., may mean a regular output of finished articles in the future.

Rabbit wool articles include shawls, berets, sweaters, shirts, caps, baby garments, undergarments and novelties embroidered on women's and children's garments. Rabbit wool, because of warmth and softness is found especially adapted to use for infants and invalids. It is said to be 8 times warmer than sheep's wool, according to some authorities, which has made it valuable for aviation garments and use in cold weather. The advent of sound pictures added another market for non-rustling garments made of this wool. *(Continued on page 113)*

Questions . . . *and* Answers . . .

WE UNDERTAKE to answer, free of charge, to the best of our ability, questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD. We do not undertake, however, routine analysis of yarn or fabric, or investigation involving unusual expense.

Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as evidence of good faith.

Letters expressing opinions or voicing criticism are cordially invited. These will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld.

Weaving Leno Laundry Nets

Technical Editor:

I wish to get some information on the manufacture of leno laundry nets. Any comments concerning the construction of the article and the loom best adapted to weaving it would be appreciated. The nets I have seen are woven leno, tubular form, and are closed by hemming. I am informed that some types of laundry nets are protected by patents, but the only type I am considering is one that could be manufactured by anyone with the proper type of equipment. (7548)

The yarn used for both warp and filling in the weaving of laundry nets is the same as that used for warp in cord fabric; viz., 25/5/3, or what is termed cable-cord yarn.

A fairly heavy loom is required for the weaving of this type of fabric. A special heavy steel doup heddle must be employed because of the heavy yarns used for the warp. The ordinary flat steel doup would not be suitable for the weaving of such heavy yarns.

The weave is a double plain, and no special skill should be required in handling it. The fabric is just a double cloth, open in the body but closed at both sides—similar in this respect to ordinary pillow tubing.

Two sets of flat steel doups will be necessary for the weaving of this fabric, one set for the top cloth and one for the bottom. A ground and back harness will be required for each set, and two plain selvage harnesses will also be needed.

Owing to the difference in contraction between the ground cloth and the selvage during weaving, it is good practice to have the selvage yarn run from a separate selvage spool. It is possible to weave a double leno tubing without selvages, but the sides of the tubing would be weakened if woven in this manner.

The double-cloth weave, woven as a tubing, open at one side or stitched together, has been used for a good many years, not only as a double plain cloth, but in many varieties of fancy effects, and it appears extremely doubtful that any patent could be obtained on it.

A word of caution as to the twist in the cable-cord filling used in this type of fabric will be in order. Owing to the open character of the weave, the warp ends will have a tendency to slip out of position if the filling is not fairly well twisted. Laundry bags are subject to very hard usage, and that is the reason why cable-cord yarns are used.

▼

Effect of Doublings on Evenness of Cotton Yarn

Technical Editor:

Many mill people imagine that the evenness of their yarn is proportionate to all their doublings multiplied together, but this is very far from true.

I was recently interested to find out how much the doubling of 60 or 80 slivers on the fine cards affected the evenness of the card slivers. I tested the evenness of slivers on both, and found the slivers from the fine cards were only just double as even as those from the first cards. When I came to test the evenness of the fine roving, I found it was 7%, and the increased evenness from the cards had disappeared, evidently through increased uneven stretching of slivers on slubbers and roving frames. On each of these latter machines there is a doubling of two, but the slivers are run under tension and lose evenness by uneven stretching. The average of variation of slivers on slubbers and roving frames is always about 3%, 5%, and 7%, respectively. With additional processes of roving the variation goes up to 9% and 11%, and the evenness of the yarn may be taken as the same as that of the fine roving.

In mills with combers there are more processes of drawing; and the more the fibers are drawn, the slicker the stock becomes, so that there is more uneven stretching, as the fibers slip more easily apart. The more often the fibers are drawn, the greater is the twist needed to hold them firmly together.

From drawing frames up to spinning frames, it is worth while to look out for defective leather or cork rolls, which cut the slivers more or less, and remove them promptly. If this is done, there will be fewer ends breaking and less waste, so that there will be ½ to 1% more yarn out of the same cotton, which will pay for the new rolls.

ROBERT SCHAELLIBAUM.

▼

Silk Soft and Fuzzy

Technical Editor:

The batch of silk from which the enclosed skein was taken was dyed in several colors, all colors showing the same fuzziness, which as you will note is quite pronounced. These colors were not boiled off together but were boiled off at different times with other lots from different batches of silk. These other stocks do not show any sign of fuzziness. All lots were dyed in a bast soap bath broken with sulfuric acid on a machine equipped with porcelain rollers.

It is my contention that the silk is soft-natured and the fuzziness due to dead fiber caused by sick silk worms or, in other words, lousiness. I would greatly appreciate your diagnosis of this matter. (7553)

We have examined this skein of gold-colored silk, and we are inclined to agree that this silk is more or less lousy, since there are so many broken filaments and they are so fine, but we cannot give lousiness the entire credit for the defect. True lousiness, as we understand it, is a partial splitting of the ultimate raw-silk fiber or brin. Lousiness is known to the French as "flocons" and "perlage," to the Italians as "fiocchetti," and to the Germans as "farstaub" and "seidenlaus."

Where the "baves" or the silk fibers as produced by the worm have separated into the two brins and the brins have become broken or partially separated into their component parts, we have a true picture of lousiness. There are some of these places in this silk.

When the filaments are broken or have been chafed by rubbing against a rough object, or have been damaged by too much and too strong boiling off, we find a defect closely resembling lousiness, but it is much larger. That is to say, the broken ends that protrude from the thread generally are composed of one or more baves and brins. Naturally these are larger than a subdivision of a brin. In this skein there are more broken brins and baves than there are splits of the brins.

Without seeing the condition of the

dyeing equipment, and being guided only by information contained in your letter as to the process the yarn has passed through, we cannot properly criticise the method as being one which would rough up the silk. However, if any of the procelain rollers are rough, the yarn might easily be so damaged as a result. Again, if the yarn is of a very soft nature in the gum, it should not be boiled off in the skein, but should be made into fabric in the gum and boiled off in the piece. The gum will protect the fibrin during manufacturing operations.

The silk feels so soft and lifeless, without appearing weak, that one can hardly place the blame on the use of boil-off materials which are too strong or alkaline as being the cause of the broken filaments. The skeins do not appear to be tangled, and therefore one can hardly accuse the dyer of using a rough dye machine and so catching the filaments and breaking them.

In most cases of true lousiness, the silk appears to have undyed fibers in it. In reality the apparently undyed fibers are dyed as heavily as the others, but they reflect the light differently due to being so fine. In a color as light as the gold, this difference in color is not as noticeable as it would be in a darker color, such as black and dark blue or red. If the other colors were darker than the gold and the defect were more pronounced in the darker colors, there would be evidence to support the claim that it is all due to lousiness.

If the silk is soaked and allowed to remain wet for a long time, there might be a danger of its losing its cohesion to a marked degree. This would provide an excellent opportunity for the filament to become separated and easily broken in the manufacturing of the yarn. This would be a possible cause of the present condition.

An examination of the silk under the microscope before boiling off would enable one to tell whether the silk were lousy, whether it had lost its cohesion, or whether it had never possessed cohesion. We are inclined to think that the silk was soft in its gum nature, that it had poor cohesion, and that at the same time there was some lousiness present; but there are too many completely broken fibrins or "baves" to place the entire blame on broken brins or true lousiness.

▼

Shaft Skips in Rayon Weaving

Technical Editor:

I am weaving eight-harness rayon twill on Crompton & Knowles double-index dobbies, head motion, and very often there are some shaft skips. It does not always happen to be the same shaft. Will you advise the writer where the trouble must be and especially how the chain cylinder should be adjusted? *(7549)*

In proper timing of a Crompton & Knowles double-index dobby, the chain cylinder should begin to revolve immediately after the bottom knife starts to move in toward the center of the loom. The dobby cylinder will come to rest just before the indicator hooks catch on the knife. When the cylinder is at rest, the pegs of the pattern chain should hold the fingers in their highest position.

A few other causes for shaft skips include play in the cylinder, bad and wobbly pegs, and bent and binding indicator hooks. See that the knives are about ¼ in. away from the hooks when in back position. We also advise cleaning the dobby with a good cleaning solution, as many times the fingers and wires are corroded.

▼

Forgot About Depression

Technical Editor:

A business friend told me the following story the other day: A wholesale house sent a new salesman out on the road. The orders which the young man sent in exceeded those from all the other men in the organization. When he returned from the trip, his employer, who was very much surprised at the results the young man had obtained, asked him if he had run into many signs of the depression which all his other salesmen had reported. The young man replied apologetically that he could not answer the question as he had not realized that his employer wanted him to look for signs of a depression. He had simply gone ahead selling goods without giving the matter a thought.

The slump would be over if it were not for our state of mind. Poor psychology is preventing our return to normal times. H. H. WHITE.

▼

Efficiency Men

Technical Editor:

I was very much interested in the short item on the subject of efficiency men by F. A. Hayes on Page 59 of the April 18 issue of TEXTILE WORLD. I was glad to see something that was a boost instead of a boot to a group of men who are honestly doing their "darndest" against great odds.

It seems to me that some of these mills which have hired these men and reaped benefits should come forward and champion their cause. After all, the operatives should be permitted to learn that efficiency men are not a particularly dangerous species and are not out to "get" the operatives. What better means is there to reach the operatives than through the trade papers? Those who read them are sure to spread what they read.

There are two criticisms to be made about many efficiency men. First, they are nearly all too ambitious; that is, they wish to accomplish a great deal in a short time. The second criticism is that too many of them forget that they are dealing with human beings rather than machines. The human element is a very decided variable; and until all variables are eliminated, 100% efficiency is impossible. Since it is still necessary to have human beings to do our intelligent thinking, it seems as though we should have to be satisfied with something less than perfection.

The above criticisms do not detract from my belief that the theory and ultimate practice of efficiency methods can be and will be adopted by all progressive enterprises. I spent two years and a half doing this very work in textile mills and use that as a basis for my beliefs.

FRANZ E. BAKER.

▼

Filling Streaks in Rayon Crepe

Technical Editor:

We are enclosing a sample of all-rayon blue crepe. You will notice upon close examination a series of filling streaks which apparently are due to individual filling threads of a darker shade. We should like to have your opinion as to the cause of this defect and particularly as to whether it could be due to uneven tinting of the thrown rayon crepe in the throwing operation. *(7551)*

Careful processing of this sample of rayon crepe shows the series of filling streaks to be due to the unevenness in the tinting, as under a powerful glass the traces of the tint can still be detected. There seem to be many complaints in regard to rayon crepes of this shade; but we believe that if there were more attention paid to the tinting of the thrown threads, this particular defect would be eliminated. We also advise having this material refinished with a slightly longer boil-off, as there is no question that such treatment will cause this defect to disappear. We have redyed the sample and succeeded in eliminating the filling streaks.

▼

Defects in Full-Fashioned Hosiery

Technical Editor:

We are forwarding under separate cover two full-fashioned stockings which show bad defects in the finished state. In one of these you will notice irregular sleazy or press marks in the silk at the fashion in the leg. The other one shows white streaks down the entire length of the leg. These troubles occur from time to time, particularly when new shades are being put through. We shall appreciate any information you can give us regarding the possible cause and remedy. *(7488)*

We have examined the two stockings and believe that in the case of the one with the irregular sleazy or press marks

at the fashion of the leg, the defect is a knitting trouble caused by improperly conditioned silk. Apparently the silk was over-conditioned by the throwster or was wet out too much by the knitter, thereby permitting the gums to become soft and sticky. When the gums loosen to the point where they begin to slough off, causing a drag on the silk and allowing the individual strands in the thread to separate and fluff, perfect stitch formation is impossible. There seems to be a general idea that the wetter the silk, the better it will knit. This is not true, as silk which is too wet and too soft is more objectionable than silk which is too hard. The crepy stitch defects will be more outstanding in the silk which is knit in too wet a condition. We also note that this stocking is very sleazy, counting only 41 courses per inch. It would be difficult to condition silk in such a way as to prevent crepe stitches in such sleazy knitting.

Defects, such as those apparent in the other sample which has white streaks all the way down the leg, may be caused by delustering in the gray before dyeing. When stockings which have been previously delustered are dyed in this manner, if the delustering chemicals are not put on uniformly, they act as a mordant and prevent an even penetration of the dyes. This same effect—probably to a lesser degree—can be caused by delustering after dyeing if the goods are tangled and do not get a uniform and even treatment. It is always advisable to provide separate dye nets for delustering and to change the goods from the dye nets after dyeing to the delustering nets for delustering. In transferring the goods from one net to another, they should be thoroughly shaken and untangled. The goods do not have a normal silk finish, but have the appearance of having been processed or treated in some unusual way. It is possible, therefore, that the goods may contain some finishing oils or soaps which make finger marks when the stockings are pulled down on the boarding forms.

▼

Fulling Blankets Made from Carbonized Stock

Technical Editor:

In finishing woolen blankets we are encountering considerable difficulty in the fulling operation. The goods are manufactured from stock which has been carbonized by the aluminum chloride method. We shall appreciate any information you are able to give us as to the reason for our trouble and the way in which to overcome it. (7504)

Many woolen-blankets manufacturers, and others who wish to full the goods heavily in the finishing operations, object to aluminum-chloride-carbonized stock, some of them refusing to use this type of stock at all. It is very possible that aluminum-processed stocks will give trouble in fulling if they are not fully neutralized and rinsed before they enter the soap bath. At the same time, the continued demand for this type of carbonizing for the last 30 years indicates that it has for certain purposes some advantages over the regular sulfuric acid carbonized stock. Probably the principal advantage is that of color, since properly handled, aluminum-processed stock has a purer and brighter white color than the acid-carbonized stock.

Aluminum chloride carbonizing is one of the many textile processes that should be under strict chemical control from the beginning of the scouring operation to the final dusting of the carbonized stock. Also, it should be in the hands of intelligent and reliable workmen.

We are enclosing an article from the Feb. 28, 1931, issue of TEXTILE WORLD which describes the precautions to be taken in dyeing stock. By giving your material the preliminary neutralizing treatment outlined in that article, we believe that the difficulty you are now encountering will be eliminated.

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Mercerizing Light-Weight Cotton Fabrics

Technical Editor:

Kindly advise as soon as possible if it is practical to mercerize and finish to gray width light-weight goods, such as 36-in., 80/80, combed-yarn handkerchief nainsook; 36-in., 96/100, combed-yarn handkerchief nainsook; and 37-in. 72/68, 6.00 cloth made from 80s two-ply combed yarns. What width should these goods be coming off of the mercerizing machine? (7507)

It has been the custom for a great many bleachers and finishers to attempt to deliver such fabrics as combed-yarn lawn, batiste, and nainsook in mercerized finishes, finished practically at gray width. To obtain this result successfully, careful study is necessary as to the specific gravity of the caustic soda solution used in mercerizing. The lowest degree of specific gravity which will give the proper amount of luster is of course most desirable. It is easily understood that if a finishing plant is singeing, keir boiling, washing, and drying before mercerizing, caustic soda at 54° Tw. will have a more pronounced shrinking effect than will be the case with caustic soda liquors at 45° Tw., both readings being taken at a temperature of 50° F. Some mercerizers have found that on fine-combed yarns, it is quite possible to obtain a good luster with a lower density of caustic liquor, even as low at 38° Tw.

We recommend mercerizing at the full gray width, and if possible without damaging the goods, at ½ in. over gray width. It is not always possible, of course, to mercerize on the tenter-frame

type of mercerizer at more than gray width, on account of the condition of the tenter clips, which are apt to puncture the selvages, unless both plates and gates are kept in the best of repair. We recommend in this particular connection a good ruggedly constructed tenter clip with what is known as the semi-flat grip.

After mercerizing at the widest possible width, it is necessary to take care that the material in the subsequent washing and bleaching operations is not reduced in width by running too tightly in a warp-wise direction through the bleach-house washers. You should bear in mind that it is impossible to obtain gain in length and full finished width at the same time.

To obtain good width in finishing over the tenter frame, it is desirable, on a finish calling for either swing tentering or straight tentering, that the fabric be allowed to go on the frames containing plenty of moisture, and to retain a good amount of moisture for at least 75% of the length of the 90-ft. finishing tenter.

We believe that it is possible to get goods off the tenter under these conditions at full gray width. If the materials are to be calendered, however, you will find that the goods lose approximately ½ in. in width, and such finishes as a rule are not called for wider than ½ in. below gray width.

In brief, we are of the opinion that mercerized finishes not requiring a calendered effect can be produced at gray width under proper working conditions; on the other hand, if the finish requires calendering, ½ in. under gray width is at all times the maximum that we should try to obtain.

▼

Dyeing Mercerized Hosiery

Technical Editor:

Can women's mercerized hosiery be properly dyed loose in a 100-lb. paddle machine? If they are dyed in nets, how many dozen can be put in each net and what size nets shrould be used? (7485)

Mercerized hosiery can be dyed properly in a paddle machine provided the equipment is not loaded to excess. As a matter of fact, many dyers prefer this type of machine for dyeing hosiery in the loose state.

The number of dozen of hosiery that can be safely put in each bag depends on the weight of the hosiery. As a rule, there should be 32 to 40 bags to 100 lb. of goods. For service-weight hosiery, which averages 70 to 80 dozen to 100 lb., two dozen to a net is enough; but for finer goods which average 120 to 150 dozens to 100 lb., three to four dozen can be put in each bag. This is an estimate, and you should bear in mind that too full a bag is as undesirable as one with not enough in it.

The size of the net should be 30x24 in. Regular laundry nets are used quite successfully, but for fine silk and rayon hosiery they should be lined with cheese cloth, or bags made of thin muslin can be used.

New Machinery *and* Processes

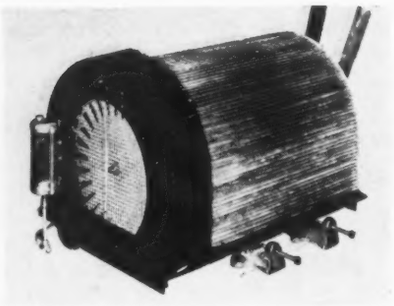
Synthetic Resins

SYNTHETIC resins, marketed under the trade name of Rezinels, have been announced recently by Glyco Products Co., Inc., Bush Terminal Bldg. No. 5, Brooklyn, N. Y. These products are of interest in the textile industry for use in printing, waterproofing, and other processes where it is desired to apply a coating to the fabric. The Rezinels are soluble in benzol, toluol and solvent naphtha. Alcohol, acetone, toluol, esters, and ethers, in varying amounts may be added to their solutions. Advantages cited are that the Rezinels have no acid numbers; develop no acidity with age; and are unaffected by exposure to air, alkalis, acids, or salts.

The liquid Rezinel may be blended with the other grades to give sticky resins of balsam-like oleoresinous consistency. By grinding pigments in liquid Rezinel, it is stated that each particle of pigment becomes enveloped in a thin film of liquid resin, thus preventing troublesome caking and lumping in finished pastes. It is also said that these products act as plasticizers and promote flexibility in many types of coatings, and that they are compatible with nitrocellulose and may be used in conjunction with rubber latex to give a flexible, durable film.

Enclosure for Motors of Open-Face Type

DEVELOPMENT of a new motor enclosure for use on any open-frame type of motor to prevent the accumulation of dust, dirt, and moisture on the motor is announced by Daun-Walter Co., 334 East Water St., Milwaukee, Wis. The enclosure consists essentially of a specially designed corrugated copper cover over the motor with steel end-walls and supporting baseplate. At one end of the enclosure a cooling fan and an outside combination guard and air deflector are provided. The cooling fan is mounted on the end of the motor shaft opposite the pulley end by means of a special shaft adaptor



Enclosure for motors of open-face type prevents accumulation of dust, dirt and moisture

which can be installed in a few minutes without disturbing the motor. By means of the fan and the air deflector, a single path of outside air discharges over the outside areas of the deep-fin corrugated copper construction over the motor, thereby carrying off the heat from the interior developed by the motor. The baseplate, which is of heavy-gage steel of box construction, prevents the entrance of dirt, dust, or moisture from below. The complete enclosure is so designed as to permit mounting on motor slide rails for belt adjustment.

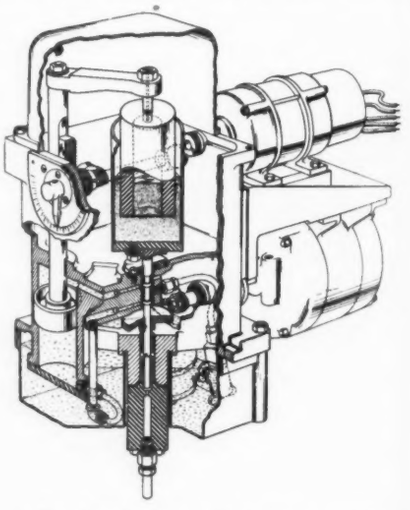
Master pressure indicator used with pressure gage of dead-weight tester type

It is stated that this motor enclosure not only eliminates all trouble arising from dirt, dust and moisture, but at the same time absorbs and radiates heat developed by the motor to a degree that keeps the temperature down to N.E.M.A. standards. Provision for frequent inspection is made, as it requires only a few minutes to open the enclosure completely and expose the motor for examination from all directions. Enclosure are available for all open-frame type motors, two- and three-phase, in sizes from 5 to 100 hp., and for d-c. motors from 5 to 110 hp.

Pressure Gage of Dead-Weight Tester Type

ACCURACY and permanence of calibration, together with unlimited power for the operation of indicators, recorders, and control devices, are features of a new pressure gage of the dead-weight tester type announced recently by Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland, Ohio. This device is in effect a dead-weight gage tester combined with a hydraulic torque amplifier and a Selsyn motor system of long-distance transmission.

The power-type pressure device is located near the pressure to be indicated or recorded. Pressure is applied by means of the pressure connection at the bottom of the device to a small pressure piston which suports a pilot valve and a cup containing mercury. A small motor which rotates the pressure piston pilot valve and mercury cup, is also used to



Sectional view of pressure gage of dead-weight-tester type

drive a small oil pump which provides the oil pressure required for operation of the power piston, displacer, and Selsyn motor.

When the applied pressure increases or decreases, the pressure piston rises or falls proportionately, and in turn a definite position of a power piston and displacer is obtained. By driving a Selsyn motor from the rack on the power-piston rod, the position of the Selsyn is an accurate indication of the applied pressure. Since the receiving Selsyn indicators

and recorders assume the same position as the transmitting Selsyn, it is possible to secure accurate remote indications or records of the desired pressure. It is not only possible to furnish this power pressure unit for practically any maximum pressure, but also for a very large suppression. Indicators of the type illustrated are recommended for master pressure indicators for central-station use.

Enclosed-Design Variable-Speed Transmission

AN IMPROVED, enclosed-design, variable-speed transmission has been announced recently by Reeves Pulley Co., Columbus, Inc. In this new unit the standard internal operating parts of the transmission are totally enclosed in a compact, cast-iron case which is said to afford complete protection in all machine applications where the operating parts must be guarded from water, live steam, chemical fumes, or abrasives.

Complete lubrication of all bearings is one of the outstanding features, and is accomplished through forced-feed fittings, located in two recessed panels at

Variable-speed transmission of enclosed type with motor base and driving motor

one end of the transmission. From these eight fittings rigid copper tubes lead to the four radial shaft bearings, and flexible copper tubes lead to the four thrust bearings fitting around the disk hubs. By means of openings from the thrust bearings, the lubricant is also forced into the spiral grooves of the disk hub bores, thus lubricating the disk hubs, shafts, and driving keys. After the transmission is in service, lubrication is necessary only once in every 30 to 45 days, depending upon the type of service.

The cover section accommodates adjustable motor rails and cross rails on which a complete motor unit or auxiliary counter-shaft unit may be mounted for varying requirements of machine-speed control. These rails are bolted to each side of the transmission cover, outside the space occupied by the lid of the cover section, leaving the lid entirely accessible for removal. The cross rails on which the motor is mounted are also slotted for adjustment, and will permit any design or type of motor of the proper horsepower requirements, consistent with the size of the transmission, to be mounted.

Easy access to the internal operating parts is provided by U-shaped recesses in the sides of the bottom section of the case which permit the removal, as a unit, of the operating parts, including the bearings of the two shafts, as well as the shifting and belt-tightening screws. The equipment is built in six sizes, covering requirements from fractional to 10 hp. in all speed ranges, and can be mounted on floor, ceiling, or in vertical position, as required.

New Dyestuffs

Two products have been brought out recently by E. I. du Pont de Nemours & Co., Wilmington, Del. One, Fast Blue RR, is a direct dyestuff yielding brilliant reddish blue shades of excellent fastness. This color penetrates well, is exceedingly soluble and sufficiently level dyeing for use on the padder or jig, as well as on all types of machines used for dyeing cotton yarns and raw stock. These properties, together with its brilliancy of shade, makes the color suitable for application on draperies, curtains, upholstery, and similar materials. The other color, Pontamine Fast Orange EGL, is a direct dyestuff producing brilliant shades of orange slightly redder than those obtained with Pontamine Fast Orange EG. It is characterized by excellent solubility and extremely good level-dyeing properties, along with good fastness to light, chlorine, hot pressing, perspiration, and rubbing. It may be dyed on cotton raw stock, yarn, or piece goods, and is applied not only in self shades, but in combination with other direct colors having the same characteristics, for the production of browns, tans, and grays. On pure silk, it yields bright oranges of equal fastness to the shade obtained on cotton and it is sufficiently fast to light to be used on silk and rayon draperies.

Several new dyestuffs have been announced recently by Newport Chemical Works, Inc., Passaic, N. J. Light Fast Brown 4R, is a direct dyeing color for cotton and rayon, producing a bright reddish brown, distinguished by excellent fastness to light and very good fastness to steaming and perspiration, also good fastness to chlorine. It is level dyeing and of special merit for drapery and other materials requiring excellent light fastness. It is not affected by metals and is applicable on all types of machines. It discharges white. Silk Fast Blue 3G, another color is characterized by its excellent leveling properties; good fastness to light, washing, and hot pressing; and excellent fastness to perspiration on weighted or pure silks. It produces a full bright shade as a self color and also may be used in combination with other dyestuffs suitable for dyeing these fibers. It is also suitable for dyeing wool yarns or pieces from neutral baths. Effect threads of acetate yarn or rayon are left white, while cotton effects are sufficiently clean for all practical purposes. It can not be discharged. A third dye, Silk Brillina Blue 10G, is of particular interest for pure or weighted silks for brilliant blue and green tones. It is best dyed from neutral baths on pure silk, and by the usual soluble oil and sodium-phosphate method on weighted silk. Wool, as well as union materials of wool with silk, dye uniformly from neutral baths, with about equal fastness properties. The fastness to light and washing is good; and to perspiration, stoving, carbonizing, and either fresh or salt water bleeding, the fastness is excellent. Effect threads of rayon and Celanese are left white; cotton effects slightly tinted. It does not discharge.

Acid Anthraquinone Blue AB, another Newport product, while primarily an acid-dyeing color, is also useful in shading and brightening chrome colors, since chroming alters the shade but little. Afterchroming slightly improves the fastness to fulling, but the fastness is not otherwise affected. It is particularly useful where very good fastness to light is a requirement, as for example, carpet yarns, fancy knitting and sweater yarns, or dress materials and suitings. For these purposes, the very good fastness to perspiration and good fastness to washing and water spotting should be particularly noted. In addition to full greenish blues it gives clear greenish blue pastel shades on wool, as well as on pure or weighted silk. Effect threads of cotton or rayon are left white. It does not discharge. A vat color, Anthrene Brilliant Violet R Paste Fine, is characterized by ease of reduction, stability of the reduced vat, and good leveling and penetrating properties. It is a finely divided color paste, suitable for printing, as well as dyeing by the pigment-padding method. The general fastness properties are very good. Fastness to boiling soap is good. When dyed as a ground color, white discharge patterns may be obtained. In addtion to its use for dyeing cotton in all types of machines, it is also recommended for dyeing and printing on rayon.

Supranol Brilliant Red 3B is a new brand of the Supranol series offered by the General Dyestuff Corp., 230 Fifth Ave., New York. Dyed from a glauber-salt and acetic acid bath and exhausted with formic acid, it produces on wool, bluish red shades of great brilliancy and very good fastness properties. The good fastness to light, washing, and perspiration, excellent fastness to water; and very good fastness to salt-water, make it especially valuable for the dyeing of yarn for bathing suits, sweaters, etc. It also exhausts well from a neutral bath and is suitable for union dyeing. It has good affinity for pure silk.

Overseers' Round-Table

THIS department offers a new subject for discussion each week and gives readers' comments on problems introduced during previous weeks. The subject which was opened four weeks ago is closed this week and a summary of contributed ideas is given on opposite page

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Group Insurance

Editor, Overseers' Round-Table:

As to group insurance, from the standpoint of the worker and the company, I do not think such insurance advisable. I think the company can spend its money more profitably and the people who receive such insurance do not appreciate it.

It is contrary to Nature's law for us to appreciate anything that is given to us and we do not know its value in dollars and cents. We all know that the young man who is raised in luxury and ease, finishing school without ever having earned a dollar, never makes as valuable a citizen of the community as the one who has had to work practically all his life and pay his way through college. J. L. Turner.

Editor, Overseers' Round-Table:

I am very much in favor of group insurance and would be glad to hear of more people adopting this wonderful plan. Group insurance is an additional protection to help the people along in case of trouble and, at such a small cost to the worker and employer, it is one of the best forms of protection in the country today. I do not think it has any bearing on people either leaving or remaining in a position.

Referring to Bills' remarks about the effect on hiring young people, owing to the rate of group insurance being fixed on the average age, I do not think this has any effect on the employer. Young help is not always the best and the bearing on this point is so small that I do not think any company will ever give it a thought.

I am 100% for group insurance. It helps everyone in time of trouble at a cost which every employer can afford.

F.W.C.

Mill Libraries

Editor, Overseers' Round-Table:

To be of real service to the mill a library must contain books and current periodicals relating to mill machinery processes and general mill problems. It should not be altogether a "reference" library, but offer facilities to every worker who wishes to study any phase of mill activity.

To start such a library a working committee of the overseers can be formed with the super as chairman. Each member would donate at least two modern text books, with the firm donating book for book for these and subsequent contributions. Thus it would be possible to gather a sound collection of technical literature. To keep in touch with modern developments it would be necessary to have current textile magazines in the library. These would be donated by the firm. The library would be free to every employee with the understanding that books would only be kept a limited time and returned in good condition. The breaking of any rule would be met by a small fine.

After such a library had been started the work of keeping it going would be small. A short weekly meeting of the committee would transact any business and an office clerk could issue and receive books about three times a week. An attractive feature would be a weekly notice in the mill hall giving particulars of highly interesting articles in current magazines.

Making Changes When th

"A FRIEND of mine, who is super in another mill," Superintendent Chase started the overseers' meeting, "had an unfortunate experience lately that I don't want to have happen in this plant, so let's get the question settled. It seems that an overseer in this plant I am talking about was out, for some reason or another, for about a week or so. During the time he was out there was quite a rush in business and work was not getting through the department fast enough, so the super went into the department and made quite a few changes in the hope of speeding up the work. When the overseer came back he went to work and changed everything back again. Naturally, the super called him up and asked him about it. The overseer said that he was running the department, had spent a lot of time figuring out how things should be done and that if the super thought that he could do a better job, then he, the overseer, wasn't worth much. Well, one thing led to another and the overseer quit. What do you men think about the whole proposition."

"I think the overseer was a plain sap," Pete said briskly. "Just because they are overseers some men get the idea that they are little tin gods on wheels and get all peeved and sulky if anyone sticks a little finger in their 'authority' pie. It seems to me that any overseer who isn't big enough to handle such things in the proper way isn't big enough for an overseers' job. In this particular case the overseer should have talked over the new system with the super when he came back, given it a fair trial, and reported the results. If the new system turned out better the overseer should be pleased to adopt it. He should have sense enough to know that just because the super jumps in at a time of need it doesn't mean that the super doesn't trust him, for if that were the case he wouldn't have the job. The overseer works for the good of the whole company and he acts like a baby

th*verseer is Away*

when he wants his department to be just like a kingdom where no one else is allowed to interfere."

"On the other hand," Bill replied warmly, "I think the overseer mentioned was dead right. I'll be darned if I'd want anyone to snoop around my department and make changes while I was away. Imagine what the help would think; here is an overseer who knows so little about his job that the super has to come in and change things. The overseer is responsible for his department and it is not right to hold him responsible if anyone else is allowed to interfere and make changes. What is more, the super has to be a good man, but the overseer knows more about the particular department. In this case the super should have waited 'till the overseer got back. In fact, I would make it an understood rule that no changes should be made in a department, except in great emergencies, without first consulting, and getting the cooperation of, the overseer.

◆

Do *you* think that the super should go ahead and make changes in a department while an overseer is absent, or should he await the overseer's return?

Overseers and others are invited to discuss this and other questions brought up in the super's talks. Letters accepted and published will be paid for without regard to length. Brevity is desirable.

This outline could be altered or adapted to local conditions. The object is to give the worker a greater interest in his work. At the same time his outlook will be broadened, his abilities increased and his leisure time directed into useful channels, to the benefit of himself and the company. W.K.

Selection of Second Hands

Editor, Overseers' Round-Table:

In my opinion, and from experience, I think that the selection of a second hand should remain entirely with the overseer. The only time I deviated from this principle I did so to my sorrow.

At this particular mill the super was temperamental and was also a large stockholder in the company. My old second hand died. Knowing that the super was moody I took the question up with him and he said it was O.K. to get a man. I hired a man from another mill and told him to give a week's notice in case he should want to go back at some time. The next day I told the superintendent that I had hired a man and he said that I had no authority to do so. This, of course, started a verbal fight and I said that if the man could not have the job I was through, and I resigned on general principles.

When I explained the situation to the man I had hired he was stubborn and would not take his notice back so he lost his job also. Bear in mind that I was no floater and had held this job for ten years.

H. C. F.,
Overseer Dyeing.

Overseers' Salaries

Editor, Overseers' Round-Table:

My personal opinion is that wages or salaries can never be standardized; there will always be some men who are worth more and some who are not worth as much.

I believe that Pete's idea of maximum and minimum salaries for overseers is a practical one. If a man is not worth the minimum do not hire him, and if he is worth more give him to understand that this is the highest rate the company pays.

Harry.

Loans to Workers

Editor, Overseers' Round-Table:

The practice of companies lending money to overseers or employees is one that will, in time, develop into a real nuisance. Banking business should be confined to banks, for it is well known that the office force encounters enough detail work without adding the duties of running a loan office.

Of course, if the office is approached with a proposition of this nature and some one feels that it is his personal duty to render aid, let him help one less fortunate, but let it be done outside the mill business.

The mill, in lending money, also incurs an obligation There are always undesirables who, democratically speaking, should be afforded the same privilege as others, but to whom one would not care to lend money. This, of course, stirs up strife among the employees and overseers and is a forerunner of much grief.

M. Mack Saunders,
The Elmore Thread Co.

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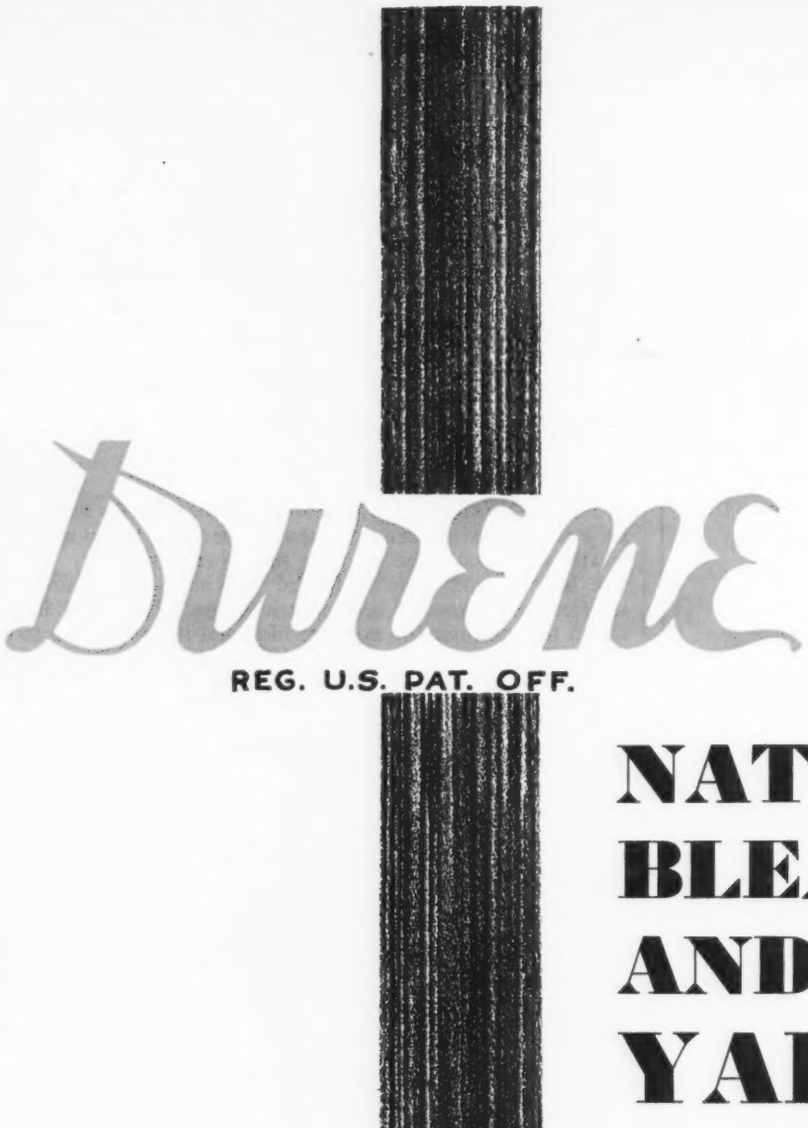
Summary of Discussion on Salaries and the Job

The question was whether salaries should be standardized for certain jobs, or whether each individual overseer should be paid according to his ability. Somewhat over 70% of the contributors believed that salary should be based entirely on ability. 15% stated that maximum and minimum figures should be set and that, between these rates, ability should govern. The remaining 15% believed that a standard rate for a certain job would remove a cause of jealousy and decrease dissatisfaction and shifting. One reply advocated paying the overseer according to the responsibility of the job and then giving him a bonus if he produced better than the expected performance.



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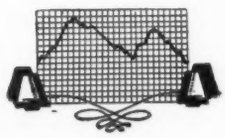

Paris Decrees Light Colors and Small Patterns

By Jeanne Ledoux

SUMMER textiles presented by high class Parisian houses are generally produced in a great variety of light or grayish colorings, but, among the shades which will particularly prevail are the different tints of yellow, lemon, marigold, light "ocre soleil"; the copper, patiné and grayish tones; those colors tending toward warm tones; all the prairie greens, forest, "tilleul" (lime), ash-green and, above all, emerald green; the softened corals, antique, natural, light; "tomato-red" and orange.

Whites will be somewhat eclipsed by pale yellows which are brighter and warmer; by smoke-white; by somewhat bluish moon-white, by the slightly tinted diamond-white, and by pearly white with its indefinable hues.

Small motifs seem to have the preference, especially in the chines, marocains and crepe satins intended for day and town gowns. Midsummer and seaside frocks will appear to be more fanciful because of bolder colorings.

On the whole, we find the same elements of decoration: various stripes, crossed diagonals, squares in different sizes; "pied de poule" in two shade texture. Dots, from 1½ to 2 inches wide, that are bright colored on light ground. All the small flowers and decorations will, naturally, be of modern designs.

Plaids Meeting Success

The plaids, which are at present a great success, will be seen with stripes in several breadths, as well as a variety of shades and oppositions of glossy silks on dim colored backgrounds.

The figured fabrics will be numerous and always tone over tone, using rayons abundantly. In this category, small motifs, varying stripes, dots or strewings of small flowers are the important design elements.

In the light summer woolens, woolen crepe or woolen georgette, trails of rayon indicating speckles or dots are used in quite an unexpected manner.

Certain new textiles are entirely composed of rayon. Some of these remind us of the linen texture or stamin, others of ottomans or jerseys.

Shantungs in Variety

Shantungs of different qualities in silk or wool will still be woven or re-embroidered. The plain and printed marocains will still be in great favor. For town gowns, small designs are popular: semi-circles, moon shapes, small flowers disposed into quincunx. For seaside and home wear, the more important decorating motifs will borrow their elements from exotic fauna and flora. A tendency provoked by the Colonial Exhibition is noted in the designs as well as in the shades of these fabrics with their black grounds set off by exotic scenes in blood-reds and deep greens.

Some other prints on figured silks will represent mythological or sporting scenes: Pegasus, golf, regattas, etc. Others still, will recall the summer season: such as Chatillon Mouly Roussel's "clé des champs" on crepe georgette. The bright tones of the field—flowers harmonize on a "meadow-green" ground on which the liberating keys stand out in the strongest manner.

For midsummer tailor-made styles, Rodier's "Lyssils," the designs of which have been borrowed from men's wear fabrics but in a lighter and softer quality, and Chatillon's figured materials ornamented with diagonals in two shades are important style trends.

The "Sinellics", variations of artificial silk stamin, are embroidered in the English fashion or dotted with vivid colors: rose on azure blue yellow, "lime green" on white, or coral on sulphur.

Rodier's Djersas offer a daring novelty in shades and present some small motifs already known: chevrons, dice, opposed lozenges.

Cottons Among Leaders

Numerous dressmakers' collections have sampled cottons such as English embroidery, feather-stitch, colored dots or stamins, which will become novelties in serious competition with artificial and natural silks. Such are the novelties which will be the success of Rodier, Bianchini, Chatillon, Ducharne.

Small Effects for Men's Wear

As to men's fashions, at Dormeuil's, Weinsbach's and other specialists it is declared that thread to thread and all small opposed striped textiles will come into favor again. White threads irregu-

Summary: **Light or grayish colorings are leaders in French styles for women's summer wear. In patterns small motifs have preference. Plaids are meeting with great success. In fabrics, shantungs are successful in a variety of forms. Wool crepes with rayon decorations are also important, and the leading Parisian fabric houses are stressing cottons with emphasis on embroidered effects. In men's wear small patterns still hold leadership.**

This instalment of the Analyst has been prepared especially for TEXTILE WORLD by Jeanne Ledoux of Paris, France. Once each quarter the Analyst appears in the form of a style forecast of fabrics. All other weekly issues will continue to consist of analysis and forecast of conditions in the textile industry, prepared, as hitherto, by Dr. Lewis H. Haney, Director of New York University, Business Research Bureau.

When You Plan A New Number

use DIXIE *Durene* for NOVELTY

Dixie durene is rapidly increasing its usefulness in the Textile field. Mills everywhere are using this yarn in working out new fabrics and new patterns. They are finding that merchandise of Dixie durene (alone or in combination with other yarns) styles well and, more important, sells fast.

When you plan your new numbers be sure to investigate the possibilities in Dixie durene. Let us show you how this yarn makes up into many novel and sales-worthy styles. Let us demonstrate how economically you can use Dixie durene in your mill. We will welcome the opportunity to help you reach new outlets and new profits through Dixie durene.

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larly joined on navy blue, gray shades from silver gray to leaden gray, sometimes brightened by colored threads only perceivable on close examination are the predominating shades for the coming season.

Style Forecast for American Fabrics

By TEXTILE WORLD'S *Market Editors*

THE fashion spotlight is moving in the direction of greater popularity of rough cottons for dress-fabrics. The lacey and nubby effects being originated by cotton manufacturers will create a place for cottons that was lacking a few months ago. New fabrics will accelerate the movement toward larger use of cottons for dress wear.

Rough Cottons in Ascendency

Cottons of the rough type—new cotton tweeds, eponges many of them sheer, the new homespuns, terrys, crepes, both light and heavyweight, new meshes and laces will soon be seen at the summer resorts and in the home in the early fall. Cottons will be worn where other fibers held undisputed sway a year ago.

In no field will this be more evident than in sportswear for milady; pastel cotton gabardine will be seen in her riding habit; hiking or country clothes will adapt many of the new cotton tweeds; while denims and heavier goods will be seen on the beaches and at the bathing pools.

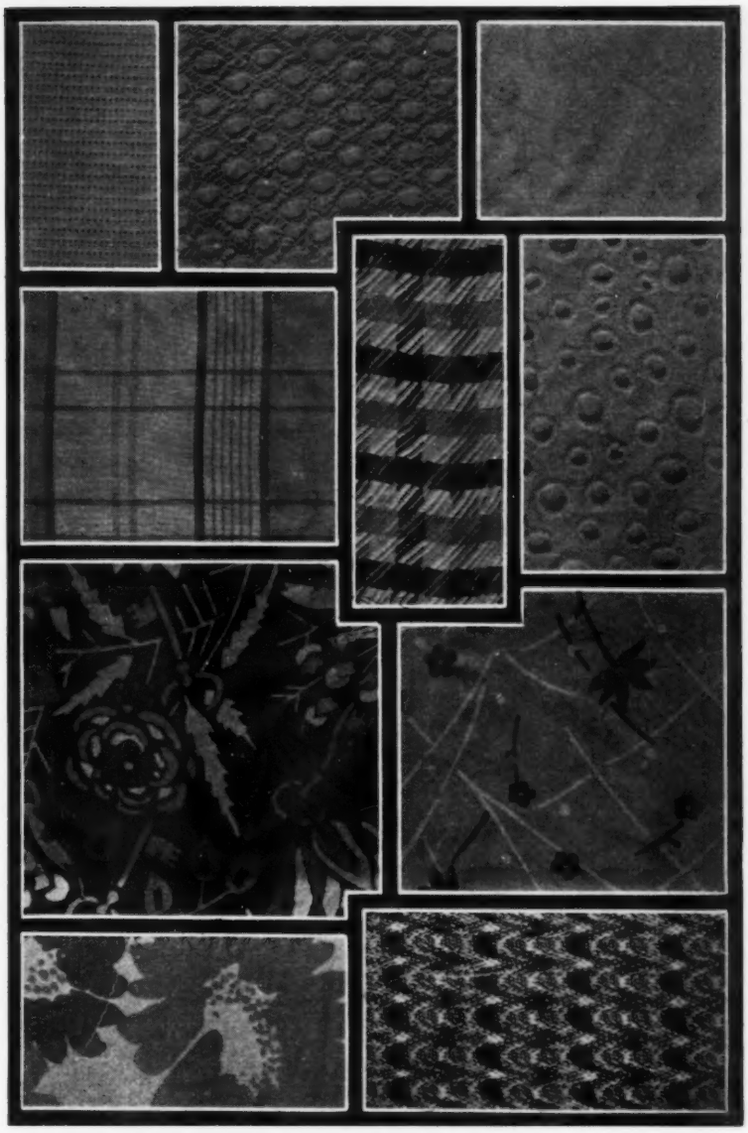
For day wear there will be seen dark sheer voiles, dimities, batistes and lawns. For more expensive dresses eyelet material will be used and cotton nets. Ric-rac effects in which Durene plays an important part will be used in cotton evening gowns.

Woolen and Worsted Goods

A wide variety of shades of brown, including rich tones somewhat grayed in cast, shadowing into deep brown, almost black, will be the colors that will be wanted by women buying their fall and winter woolen coats. Yellowish and reddish browns will be well represented in these garments as well as in the worsted dress and suiting materials, which of course will be of the rough and nubby construction that was popular in woolens or the crepe effects in worsteds.

Although the outlook in women's wear is for novelty rough fabrics in a wide range of colors, the men will trend to somber hues, perhaps unconsciously in keeping with conditions in some parts of the country. The fabrics will be what the trade now knows as staples, but which are really more properly in the semi-staple class. Small weaves and small patterns will be the rule, wanted in the staple colors; gray will continue its present popularity, and the old standbys, blues and browns, will also be wanted.

More men will be probably clothed in worsteds than during the first half of the year as low prices on fall and winter goods make worsteds a "buy." Although fancies are being spoken of with hope, it seems more likely that men will not kick over the staple traces for a while yet.



A group of fabrics from Paris

Plains Prominent in Silks

Style trend in broadsilk fabrics has veered very sharply to plains and while certain of the printed sheer group, notably chiffons may hold leadership through summer the emphasis will undoubtedly fall on the plain colors. Plain flat crepes grow more important each month, and fashion has put the stamp of approval on them for summer. White is the major color, with a secondary preference for white used with contrasting shades such as green, orange, black or any of the darker blues. The use of white in contrast achieves some striking dress effects, and this mode has been endorsed both by Parisian and American style leaders. Pastels also are important in the flat crepes—more so, indeed, than last year; New York stylists expect the vogue for pastels to carry over into early fall. Another signal feature of fabric preference in dress manufacture this season is the call for pure dye goods.

Shantungs continue important for sports coats and dresses. Here too white is important, but there is also wide interest in the off-white tones and in pastels. The position of printed shantung, which was one of the season's novelties, is in doubt. Although approved by stylists, certain mills have had difficulty in selling these lines. The prints include numerous fresh and charming patterns which have been accepted for their originality.

Mixed Knit Goods Situation

The knitted outerwear style picture is mixed, with consumer fancy following many paths. Spring sweaters for women have tended to the conservative; jazzy designs fall to second place, though contrasts continue popular. The two-tone motif is exploited to the limit and promises to continue to be in the lead all summer. This style allows for almost endless variety; tans, blues, greens and grays are utilized in two-tone designs in most of the newest sweater lines. Women's bathing suits also exploit this idea effectively, but here there is a growing call for solid colors, mostly dark shades.

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COTTON and WORSTED YARNS

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YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

◆Cotton Yarn Buyers Using Higher Quality

ALTHOUGH the sales yarn market has passed through an exceptionally quiet month, one of the worst which dealers have found for a long time, there are certain angles to the situation that make the outlook more promising than current sales indicate. April has been a poor month not only in new business but in deliveries. March was a poor month for new business but fair for deliveries on contracts placed several months previous.

There are definite signs that manufacturers have been doing the best they could under conditions which confront them in goods orders. Their fairly liquid condition means that an immediate flow of yarn from spinners' and dealers' warehouses will begin as soon as orders for products increase.

Counts and qualities which are selling show a marked change in type of demand as compared with a year ago when prices were much higher. More manufacturers are using combed yarn in place of carded, and more are using two-ply in place of single. Use of single was adopted to cut costs when yarn prices were higher. Now that prices are low, users are turning away from singles and sales are so small that many houses are no longer familiar with prices.

Combed Instead of Carded

Underwear mills are using combed yarns where they have been using carded for years. The fact that combed is available at about the same price formerly paid for carded, has caused this change. The consumer will thus secure a higher grade garment for the same money.

Dealers report that there is little interest in carded knitting yarns, a condition that has been apparent for months; yet there is a fair demand for single combed counts used by underwear trade and a number of spinners have been unable to keep up with deliveries.

There is a wide range between figures at which mills are buying small lots and figures that representative spinners are quoting. Fair quality knitting yarn spinners are holding at 18c. for 10s cones, but business is being placed 1c. less; in weaving counts, many mills hold 20s-2 warps at 20½c. but buyers obtain 1c. or more under that price.

Spinners need business badly and the lower range is quoted by those anxious to keep running at almost any cost; the higher range is being held by spinners willing to close rather than sell at greater losses.

The market is not so liquid as a month ago. Buyers who placed substantial orders months ago have not taken deliveries as anticipated, and both spinners and dealers are carrying large quantities that should have been in manufacturers hands months ago. This must be corrected before a sustained spurt will occur in trades such as wire insulating.

◆Cotton Goes Lower Under Liquidation

THERE would not appear to have been any change of importance in the cotton situation itself during the week, but the futures markets have been unsettled by the action of securities and stock house failures, and prices have worked back to very nearly the season's low records. These, it may be recalled, were established during the middle of December when May sold at 9.80 and October at 10.22. Further liquidation of May contracts has been in evidence, but this has been absorbed by the trade against sales of later deliveries and reports reaching here from the South have indicated a generally steady basis with no pressure of spot offerings. Notices, representing about 70,000 bales, have been issued against May contracts and are supposed to have been taken by the trade at the prevailing late month premiums. While these premiums facilitate the absorption of near month offerings and take pressure off the near months, it distributes the weight over the general list, which has probably contributed to the decline.

The crop which was reported to be making good progress following the appearance of favorable weather after the Easter holidays, has suffered a setback during the week. Field work has been checked by rains or showers, while temperatures have been too low for germination and have probably necessitated some replanting. Something of this sort occurs practically every spring, however.

There has been nothing to cause any revision of sentiment as to acreage or the use of fertilizer. The private reports appearing point to an acreage reduction of between 8 to 12% and it is likely that the average cotton trader here feels it is as likely to be under as above 10%. Little additional information has been received as to the use of fertilizers, and it is still the most general opinion that there will be a drastic reduction of perhaps 25 to 30% in the use of commercial fertilizers on cotton. Chairman Stone in a recent interview said his information pointed to a reduction in fertilizer use of about 1,000,000 tons this season. An additional drawback exists in the probability of insect damage following a mild winter. Meanwhile, the development of the statistical position tends to confirm rather than modify previous calculations of a heavy carry-over at the end of the season. According to the New York Cotton Exchange Service, world's consumption of American lint cotton for the month of March was 977,000 bales compared with 1,062,000 last year, making a total for the first eight months of this season of 7,358,000 against 9,167,000. It is beginning to look doubtful whether world's consumption for the entire season will exceed 11,300,000 bales which would suggest an end-season carry-over of around 8,750,000 bales compared with 6,176,000 last year.

Cotton of foreign growths has been moving much more freely into consumption than American, and the carry-over of all growths will be considerably lighter than indicated by the figures on American alone. Moreover, there are some who feel that, after two years of curtailed mill production and the most restricted sort of hand-to-mouth buying on the part of ultimate consumers of cotton goods, there has been a decrease in stocks of the latter which will go some way toward offsetting the accumulated surplus of raw material.

Stocks in Memphis are Light

MEMPHIS, TENN., April 27—While demand for cotton in this market during the week was less active, wanted descriptions were scarce and more difficult to buy than to sell. Unsold stocks total only 22,074 bales, about half the total at this time last year, very light

Market Briefs

Cotton: *Narrow fluctuations, without general support.*

Cotton Yarns: *Prices falling as demand contracts further.*

Cotton Goods: *Decline in print cloths causes apprehension.*

Wool: *Quiet with signs of weakness; London auctions open at declines.*

Worsted Yarns: *Fair interest in knitting counts; prices steady.*

Woolen Goods: *Activity in men's wear for fall.*

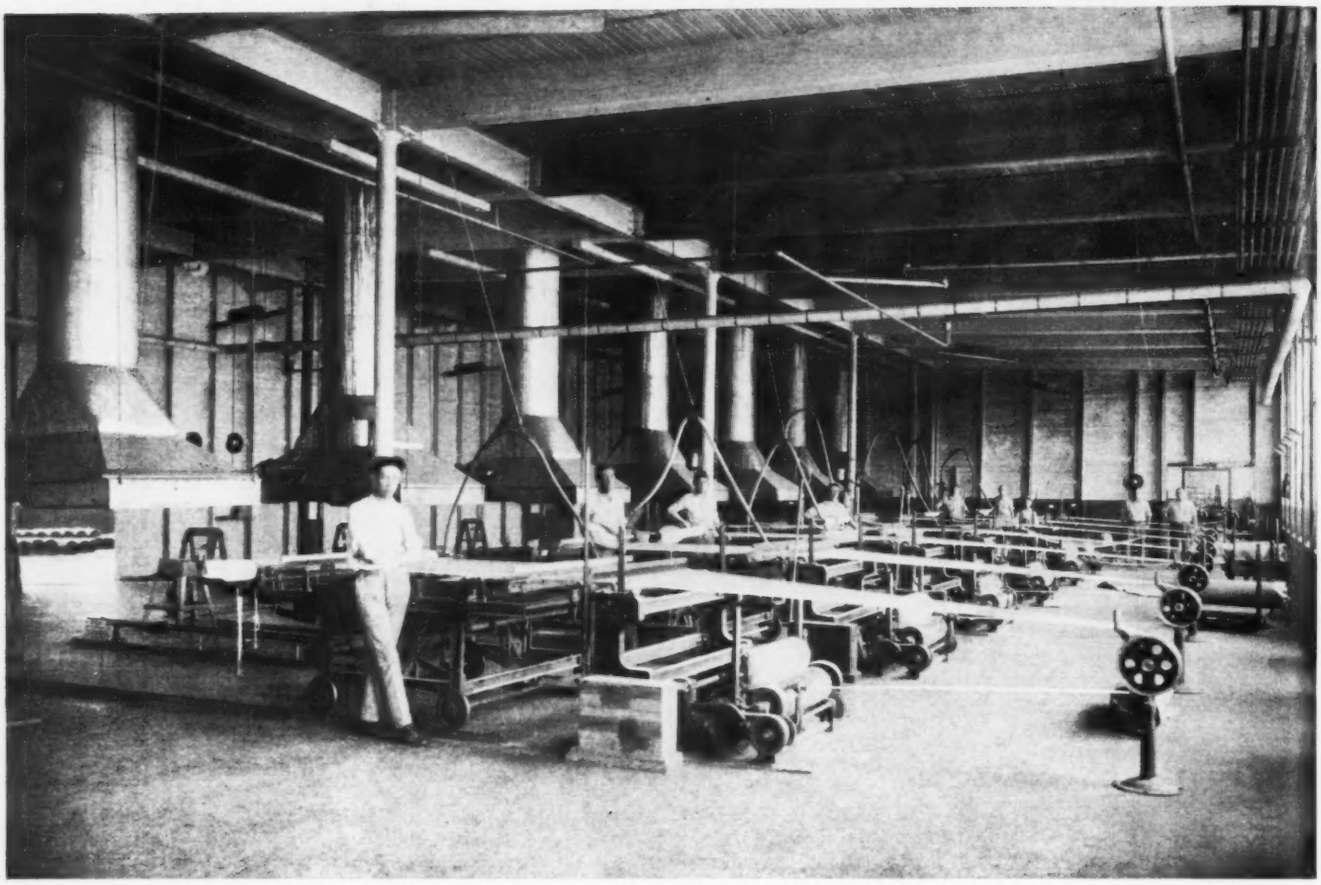
Silk: *Buying sluggish. Prices off 15-20c.*

Silk Yarns: *Thrown yarn active. Spun silk quiet.*

Silk Goods: *Shantungs and summer chiffons leading in moderate market.*

Rayon: *Spirited buying. Look for steady call through May.*

Knit Goods: *Hosiery firming trend slackens, but demand is firm. Fall underwear prices reduced 7%. Spring underwear and sweaters and bathing suits all active.*



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YARNS AND RAW MATERIALS

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for any period of a year in any year. This unsold stock has been combed over so often and receipts for months have been so light that nothing much is left but odds and ends, making it extremely difficult to get together sizable lots of any grade or staple.

The situation is tight and would be tighter but for the fact that merchants, warned by the drougth in this territory, have been very cautious as to short commitments all season. Some oversold and have had to pay the penalty but nobody has been hurt severely. The impression prevails that troublesome commitments have been covered or adjusted and some, for a week or more, have been looking for a decline in basis which, so far, has failed to materialize.

Premium staples prices are practically the same as they were a week ago, despite a decline of about 20 points in contract values. Strict middling 1⅛ in. is officially quoted at 225 on the July contract, 1 3/16 in. at 350 on and 1¼ in. at 800 on. Merchants say fewer mills seem to be in need of cotton and that inquiry generally is for small lots.

The weather in this territory and throughout the belt generally was unfavorably cool during the week and in most districts there was more rainfall than was needed. No irreparable damage was done. Much cotton has been planted and some is beginning to come up. Fields are in good condition.

◆Cotton Wastes Continue Dull

COTTON waste consumers continue to buy on a restricted scale, picking up odd lots of the various grades and types whenever they are successful in finding a seller willing to meet their low bids. Larger business could undoubtedly be done if dealers were willing to grant concessions, but the great majority of them are holding prices firmly at quoted levels, insisting that current quotations represent little margin of profit, and in many cases no profit at all. Complaint is heard in some quarters of the action of certain commission houses in cutting commissions and selling below ruling market prices.

In the early part of this week there was some buying of bedding and upholstery stocks, picker, fly, vacuum strips and nappers, at unchanged prices. In spinnable materials, good upland and peeler strips were in fair demand, while comber was relatively quiet. White and colored threads for machining purposes were dull. Considerable pressure is brought to bear on dealers for lower prices on these wastes; dealers refuse to meet this in most cases with the result that buyers withdraw bids and stocks continue to pile up.

◆More English Spun Knitting Yarn Sold

THERE has been a better request for yarns used by the outerwear trades. Manufacturers other than bathing-suit have come into the market for filling-in amounts. Spinners are still booking large amounts of single and ply from bathing-suit mills and with other trades now buying the outerwear section is assuming greater importance.

Demand from knitters had been previously largely confined to French spun qualities which were being taken in single, but during the last two weeks spinners of English qualities have found an expanding interest from knitters; most of it has been in two-ply.

Quotations of English spun yarn have shown no marked change as compared with a week ago, but there have been minor concession in French spun. The market as a whole, however, presents an even appearance and although there are price-cutters among both classes of spinners the price level is resisting further declines in a fairly satisfactory manner.

Two-ply English spun knitting numbers are quoted at 82½ to 85c. by most spinners, but yarn is availablle at 80c. which is the level at which most of sales of the week were closed.

There is little contracting in knitting counts, most of the business calling for prompt delivery. In men's wear numbers there has been a fair volume of contracting in mixtures and leading spinners have orders on their books which will keep them engaged for the next two months. Interest in men's wear counts is expanding and the influx of new orders to weavers is being felt in the sales yarn market.

Men's Wear Mixes Lower

New contracts in mixtures indicate that most of the business has been placed on the lower side of quotations and this fact has caused spinners who were 2½c. above this level to make adjustments in their prices. For this reason quotations on 2-30s, 64s, mixes, has been lowered this week, bringing it down to the basis of actual sales.

Although it is between-seasons for women's wear mills, the outlook for yarns going into this field is good. Several manufacturers who had turned their looms over to production of men's wear while dress goods demand was small, are turning back to women's wear.

Reductions in worsted yarn prices represent concessions in margins on the part of spinners, since wool dealers are holding firm when desirable wools are sought. Knitting yarn spinners assert they are unable to obtain cheap wools, and those using 64s and finer are confronted with additional firmness in these grades. Many yarn users are taking advantage of what appear to be yarn bargains and are covering conservatively for the next few weeks.

◆Wools Awaiting More Mill Interest

WOOL prices changed little last week, but if anything the situation favored the buyer. The market has run into another period of inactivity and business in bulk is not expected until larger mill consumption develops and the situation in the goods market shows more promise than at the moment. The general wool basis is steady, but manufacturers continue somewhat bearish in their attitude in view of the fairly large surplus of unsold old clip wool.

Although there is considerable activity seen in the taking over of the new clip, prices being paid are nevertheless speculative to the degree that they have not yet received the approval of manufacturers whose recent purchases have been almost entirely of old clip wools. On some lines of original bag territory wools quotations are easier, 58s and 60s strictly combing territory wools moving at prices 1 to 2c., clean basis, below similar wools bought two weeks ago. Quotations on 48s, 50s and 56s strictly combing wools are nominal, due to the restricted demand. Graded Texas wools are moving in fair quantities. Strictly combing 64s and finer Texas wools bring 65 to 66c. French combing wools from similar lines move at 58 to 60c., original bag 12-months are slow except for small quantities of short staple lines which bring about 60c. The market for Ohio and similar fleeces is quiet, with fine wools scarce. Old delaine lots are well sold.

The domestic mohair situation disp'ays no encouraging feature. There are large stocks of last season's hair yet to be sold. The Texas spring clip has been cleared at an approximate price to the grower of 22c. Interest in mohair is much larger in Bradford than in Boston and during April about 200,000 lb. were re-exported from Boston to Bradford. Total stocks of Cape and Turkey mohair in bond Boston at the beginning of April amounted to 743,000 lb.

The edge is off the foreign wool market as the season draws to a close, while in the U. S. wool market prices are fairly steady though awaiting another testing of wool values. The Bradford top market, a good barometer of wool values, lost 2% in merinos and 4% in crossbreds last week. The South African wool market receded 2% and the closing of the Wellington, New Zealand, crossbred market left prices 3% below

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"Remember that Quissett is a versatile yarn mill. You're safe in ordering any kind of cotton yarn from them. You'll get just what you want, on time."

So runs the advice from father to son, from old-timer to newcomer. It is sound advice, proved by the fact that Quissett is always running on special yarns as well as on the regulars. For example, a few of the specialties produced within the last month include yarns for draperies, blankets, plushes, shoe fabrics, cotton backed sateens, electrical insulation, the silk trade, braided belts, suspenders, girdles and other elastic fabrics. Also, Quitex Spun Rayon is being widely used for novel effects in a host of fabrics.

It is logical that textile men should depend on Quissett for special yarns. Here is a huge plant, with up-to-date equipment, manned by people whose lives have been spent in the spinning craft. Your order for a special yarn requires no experiment, no wasted time, no costly mistakes. It's just a matter of routine production, low-cost spinning, and fast delivery.

Heed the advice of your textile colleagues—"Quissett is versatile—go to them for *any* kind of yarn."

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New Bedford, Mass.
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Our quotations based on Cost + a reasonable profit.

QUISSETT Cotton Yarns AND Quitex Spun Rayon

YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

those made in the middle of March. Present indications point to a probable slight decrease in the world clip for 1931. There is still a considerable weight of New Zealand crossbreds to be marketed, but stocks in other producing countries are small. The U. S. clip will be larger than in 1930 and the National Wool Marketing Corp. will probably secure more wool than last year.

◆Cautious Buying of Wool Substitutes

BUSINESS in reworked wool continues in restricted volume, but manufacturers of these fibers are doing all they can to provide suitable raw materials for woolen manufacturers who are striving to produce cheap and attractive fabrics in competition with low priced worsteds. Light hoods continue a favorite with some woolen mills which hope to utilize this shoddy with garnets and B wools for certain new heavyweight fabrics. Sales of light hoods free of silk at 11 and 11.50c. are noted. The supply has been reduced by recent activity.

Woolen mills are buying cautiously in a restricted range of rags, finding graders in a concessionary mood. Rarely is an order turned down on account of difference of price between the rag merchant and the mill buyer. Price movement in old rags during April was quite narrow. Old white materials are moving a trifle more freely, but prices are not improving. Larger mill demand for paper mill felts has been seen in recent weeks, the best quality bringing as high as 25c. and sales of old white blankets have been made around 12c. The standard white sorts are quite close together and barely firm on small business arriving. White softs at 22c., white serges and flannel at 23c. and white knits at 24c. represent the general position.

The undertone of the waste market is satisfactory. Larger business is confidentially predicted for the weeks ahead. Demand for white materials continues in the lead. Colored wastes meet competition from low-priced reworked materials but the fine colored spinner's garnet is said to offer a superior line.

April was a generally slow month in noils. Mill call for additional supplies is developing slowly, yet the situation is so fundamentally healthy that the market continues its routine operations with little or no apprehension as to the future. Consumption is believed to be larger than production at the present time. Values are steady on all grades, prices paid on any purchase either "off" or "on" standard quotation, the variation depending upon the character of the material offered.

◆Thrown Silk Call From Hosiery Mills

DEMAND for thrown silk has improved this week, the new call coming chiefly from hosiery manufacturers. These knitters have increased production somewhat and they talk of further increase; the recent Philadelphia strike plus the general drive to curtail hosiery production has depleted stocks in mills and the manufacturers are more ready to buy yarn. Yarn orders are small, but they come in steadily, and the outlook is considerably improved. Broadsilk weavers buy cautiously, demand being limited for the most part to the three-thread crepes and a little organzine business. Prices of thrown yarn are 10 to 15c. off, reflecting the current raw silk weakness.

Spinners are busy preparing their new fall line, and are offering a wide range of try-out yarns to manufacturers. Demand to date has been restricted to experimental business, but the spinners look for improvement in June. Spot buying has fallen off sharply as against last week; there is a moderate demand, chiefly for shantung yarns and this should continue perhaps for two weeks more. The weavers are still producing these rough goods, and buy yarn only as they sell fabrics, the result being that they have practically no yarn stocks in mills. Shantung fabrics are moving well, and further reorders are looked for, though they will not aggregate any size. Spun yarn prices hold steady.

◆Indifferent Buying Weakens Raw Silk

RAW silk is unsettled and the immediate prospects are doubtful. Prices are 15 to 20c. below last week, with no rush of takers at the new levels. Broadsilk weavers are exceedingly cautious; they look for further recessions and are holding off in anticipation. Their production is not very lively, and they are not in immediate need of stocks. The present lull has been expected by importers; it is taken as part of the fluctuation which seems on the cards for the next four weeks. However, recent reports from Japan indicating strong financial pressure to release some of the silk now in bond, have had a depressing effect on New York tone.

New York sellers hope that the sale of the surplus silk will be deferred, as they look for a sharp decline if any large quantity is offered for sale in Yokohama. The present is an unpropitious time for the dumping of the stock, as buying interest is light and promises to grow lighter; mid-week reports from the Orient indicated that Japan was still hesitating about releasing the stock in quantity.

The lull in buying in New York finds importers with plenty of silk on hand, and buyers have no difficulty in getting quick shipment of all sizes. One encouraging angle is the increased interest being shown by hosiery mills. Sellers are informed that hosiery production is increasing and that these factors will soon need substantial quantities of raw silk.

◆Rayon Producers See Active May

THE steady call for rayon yarns has encouraged producers to look for a more active May than usual; ordinarily, demand begins to wane about May 15, and orders slide off gradually until summer. This year, however, stocks in hands of weavers and knitters are so light, and production of rayon merchandise is so backward that there is possibility of steady yarn buying throughout the month. Manufacturers seem to be gaining confidence slowly, and they tell their rayon sources that they look for a good fall.

The long outlook for rayon indeed is better than the immediate; current business is voluminous, but prices are so low as to permit little profit. Volume has not increased sufficiently to balance up for the reductions. The steady buying, however, is cutting surplus stocks, and is clearing the decks for fall, and rayon producers now report a moderately healthy condition as regards stocks. Yarn on hand is still equal to at least three months supply, but further diminution is expected before the summer lull.

There is an abundant quantity of the so-called obsolete yarns available at 65c. and it now appears likely that this yarn will remain a vexing issue for the remainder of the year. Several firms have enough on hand to continue selling until December; executives of these companies stated positively that they were not producing any more of the obsoletes. It is understood however that some firms resumed manufacture of these yarns to get the business which was attracted by the below-market price. The strong call for 65c. rayon has raised the issue of whether this demand is hurting the call for standard yarns. One producer questioned on this score said he did not find his sale of the standard yarns had been perceptibly affected.

Producers do not seem to regard 65c. rayon as a serious problem, though they admit that it practically means an unofficial price cut. The only real difference between 150s selling at 65c. and

(Continued on page 105)

DURENE . . .

THE FINEST COTTON, IN SUMMER LINES

BY WELL KNOWN MANUFACTURERS

Men's durene socks — soft, comfortable, durable—from Siegel and Davis, Inc.

THIS "cotton summer" will bring prestige and profit to manufacturers who are stamping or labelling their merchandise with the durene name – because:

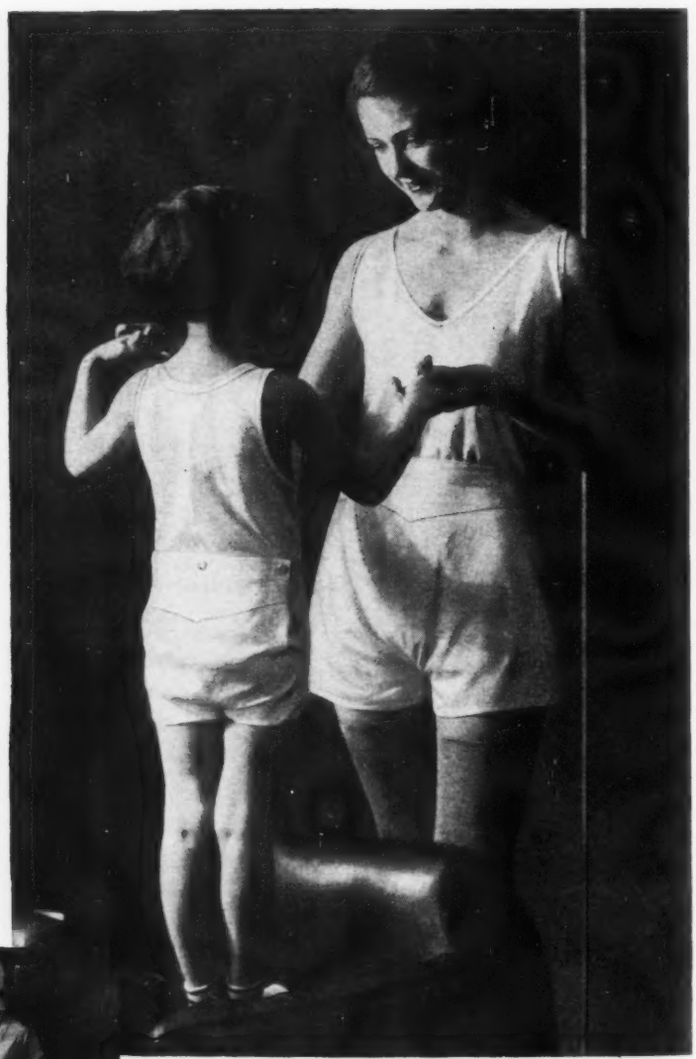
durene, the finest mercerized cotton, is steadily advertised to store buyers and to the consuming public . . . every day more people are learning that the name durene guarantees highest cotton quality—

the Durene Association of America, comprising 85% of the mercerizing industry, promotes the sale of durene merchandise through every modern merchandising channel — by personal contact with cutters, designers and store buyers and by nation-wide publicity, style shows and educational lectures.

Are *you* using the durene label, and getting this valuable sales help? . . . If your line does not yet include durene numbers, write or call — it will not obligate you in any way.

DURENE ASSOCIATION OF AMERICA
250 FIFTH AVENUE, NEW YORK CITY

DURENE
THE FINEST COTTON
QUALITY BEGINS WITH THE YARN



Boston Knitting Mills, Inc., produces this child's durene unionsuit, and misses' durene vest and shorts. The child's durene socks are from Allen-A Company. The durene stockings are from Sulloway Mills.

Durene flat-knit pull-over shirt from Oneita Knitting Mills.

Durene fabric by Broadalbin Knitting Co., Ltd. Dress by Zoltan Rosenberg.

MEMBERS:
ABERFOYLE MANUFACTURING CO., PHILADELPHIA, PA.
AMERICAN YARN AND PROCESSING CO., MOUNT HOLLY, N. C.
DIXIE MERCERIZING COMPANY, CHATTANOOGA, TENN.
HAMPTON COMPANY, EASTHAMPTON, MASS.
CLARENCE L. MEYERS, INC., PHILADELPHIA, PA.
SPINNERS PROCESSING CO., SPINDALE, N. C.
STANDARD-COOSA-THATCHER COMPANY, PHILADELPHIA, PA

FABRIC MARKET REPORTS

TEXTILE WORLD ANALYST

◆Men's Wear Fabrics Selling Actively

RECEPTION the fall and winter men's wear lines are receiving is the subject of considerable comment. Large sales have been reported by leading houses and the volume has caused surprise. Sales have been especially noticeable with selling houses specializing in the high and low price lines. They have found trading more satisfactory to date than the medium grade houses.

A firm which handles goods selling from $2.10 up to $2.60 reports a large volume of business with an expanding tendency this week. Demand runs almost exclusively, it states, to staple and more conservative patterns. This means mixtures, small weaves and such. That buying of such proportions has come to hand so early in the season is particularly pleasing to mills in need of orders to take up the slack of ending of lightweight buying.

Worsteds Are Popular

Worsteds have the call so far in men's wear and buyers are pleased with the high quality of merchandise that manufacturers have produced for the fall season. The quality is high and the prices are low, a combination which is hard to beat. In view of the low prices, most chain stores seem to be buying worsteds in preference to woolens except where sports wear is concerned. Worsted manufacturers say that the fall season will witness a greater percentage of worsted suits than was seen in the season just ended, in which it was high.

Spot demand for flannels in women's wear fabrics is the feature. There is a buyer's spurt in these lines for summer wear and houses which carry staple flannels, which had been inactive for years, find themselves unable to meet the active demand for this type fabric.

Women's Wear Marks Time

The fall season in women's lines is just developing, and Botany has not shown its new fabrics as this was written. The openings of this firm, first announced for last week, were postponed. It is not felt that later openings will be a handicap, as buyers are not rushing to cover as yet.

In fact there is a fair quantity of merchandise left over from the spring season which must be liquidated, but most of this has left the manufacturers' hands, at prices which could only have shown a loss and now is reposing on retailers' shelves. A number of retailers are advertising goods at $1.40 which manufacturers assert were purchased, at the end of the season, at distress prices, probably around 60c. a yard. The goods are being advertised at a price that leaves the retailer a fair profit, but of course the selling means a loss to the mill.

Mills To Keep Liquid

Mills are beginning the heavyweight season with a strong policy on inventories. At first it was felt they had made a good beginning in this last season, but a number took important losses. They are again saying, "never again."

◆Print Cloths Must Weather New Storm

PRINT cloth prices have been declining at a more rapid pace than the weakness in the raw material market justifies. This means that notwithstanding a stronger statistical position than has existed heretofore, there are mills and selling houses which mean to force business almost at any price. The outlook is not promising for the next few weeks in view of this.

Indications are that demand will not expand greatly, this being between-seasons for most buyers and in addition, it is recalled that a particularly large volume of business was placed two months ago. Much of this has yet to be delivered, and prices are at least ½c. above what these same large contracts could be placed for today.

Big Buyers Face Losses

The fact that prices have not held better than they have, is causing considerable disappointment among large print cloth buyers. Those who placed largest contracts have a substantial loss on goods purchased not long ago, and at least part of the blame for the loss is placed on mills and sellers who have not done what could have been fairly asked of them in regard to firmness.

Print cloths have declined at least ½c. since the present dullness has been apparent, and it is argued by some selling houses that cotton would have had to drop 2½c. to meet this decline in goods. Since cotton has done no such thing, manufacturers' margins have taken another pinching.

Mill Margins Smaller

Instead of taking this temporary period of lack of demand and declining cotton to hold prices and widen margins, manufacturers have done the reverse. There are houses whose mills need business and such firms, it is anticipated, will continue to cut prices and weaken the level to a greater extent; especially is this expected in view of continuation of present lack of demand.

Large buyers have again lost confidence and they will not be in the market until concessions of importance under the present lower level are made. With such a prospect, sellers assert that they see no reason to expect other than expansion in stocks during the next few weeks notwithstanding continued curtailment among the mills.

Drills Selling Better

Sheetings have been quiet along with print cloths, but a larger request for drills has been reported and other coarser lines show a tendency to remain active as compared with print cloths. Broadcloths have been without important interest.

Spot 80-squares reached 8c. at the peak; they are now being offered at 7c. A similar reaction is now taking place in 68x72s and the decline during the last two weeks in this description has been severe, several firms having lowered their ideas ½c. within this time.

◆Broadsilk Demand Accents Shantungs

CUTTERS and retailers have increased their call for shantungs and printed chiffons this week, the broadsilk trade is enjoying a fair demand at that end. The retail call for piece goods continues larger than usual and some of the important broadsilk houses find it to be in excess of cutter business. An interesting feature of current demand is the tendency toward revival of printed flat crepes; despite the bad slump in these lines last February, orders have begun to pick up, and several houses report a moderate demand.

Cool Spell Slows Buying

The call for summer chiffons, both large and small florals, is active, but all orders are small. The cool spell of the past week has slackened buyer interest at this end, and weavers look for sizeable orders once the weather gets warm again. Shantungs also are being held back somewhat by the unfavorable weather. Garment manufacturers find their own merchandise slow to move, and they are determined not to produce for stock, so they are holding down very strictly on fabric orders.

White Shantungs Dominate

Current call for shantungs leans to white; it is estimated that 60% of the week's business has been in this range. There is also interest in the off-whites, "natural" being favored. Pastels, which constitute the remainder of the line, are in minor demand. Shantung sales to date are behind this time last season, but fabric manufacturers regard this as natural in view of the general backwardness of business. They look for a decided improvement at this end the latter part of the month.

L. F. Dommerich & Co.

Finance Accounts of Manufacturers

and Merchants

Discounts and Guarantee Sales

GENERAL AND EXECUTIVE OFFICES:

271 Madison Avenue
NEW YORK

ESTABLISHED OVER 91 YEARS

KNIT GOODS MARKETS

TEXTILE WORLD ANALYST

◆ High Pressure Call For Bathing-Suits

SWIMSUIT demand is reaching the high pressure point, though here and there manufacturers complain of easy prices. On the whole, the tone is firm; numerous medium-sized mills have raised their prices during the past ten days, and distributors have difficulty in getting early shipment of desired lines. Most bathing-suit firms now ask three weeks for delivery, and a moderate percentage are sold out up to June.

Spring sweaters, particularly men's sleeveless garments, took a jump this week and some Worth street firms enjoyed the best business in several seasons. There is a shortage of sleeveless garments and prices there are firm. Golf sets also move actively. Prices of certain sweater lines are hesitant, the sleeveless lines being an exception. Other knitwear lines also enjoy good call. Buyers show much interest in low-priced rayon berets, and some mills are selling well ahead on these lines. The market offers a wide range of artistic models; the favored color effects are varitoned greens, black-and-whites and gold-and-blacks. Berets selling to the distributor at $4.50 to $5.50 per doz. are in excellent demand.

Outerwear manufacturers generally are confident of season's outlook, as business to date has been satisfactory. Heavyweight sweaters, however, continue backward, and there is little prospect of any real business at that end before June.

◆ Fall Underwear Prices Cut 7%

A NUMBER of the leading heavyweight underwear mills cut their prices this week, following a reduction by one important firm; the cut averages about 7%. It has not had any stimulating effect on the market, as yet; there was little buying interest before and there is even less now, as buyers are waiting to study the new lists of all manufacturers. The reduction is not regarded with much favor by the mills, and in truth it seems a questionable move. Market prospects, while indicating a late season, had not been so dark; the stocks in mills are moderate and an active call in June would certainly have stimulated a tightening of prices. There seems to have been a rather needless element of panic in the cut. The first result of it evident in Worth Street was that the hesitant buyers simply refused to place any business at all; these factors are afraid of the possibility of another cut, and do not want to get caught "buying high."

Lightweight underwear continues active. Balbriggans move steadily; all orders are small, but the quantity of business placed is encouraging. Cotton summerweights sell at pressure, and mills have difficulty in meeting spot call for the most popular numbers. Jobbers and retailers buy practically as they sell, which is keeping distributor stocks at a record minimum; however, as manufacturers have been producing on the same basis, there is no abundance of merchandise around, and the tone of the market is very firm. The lightweight season, though backward, is proving better than expected.

◆ Hosiery Easier, but Continues Active

THE consistent trend toward firming in the hosiery market slackened somewhat this week, but it does not appear more than a temporary let-up. The call continues active in the low-price range, and irregular full-fashioned hosiery is scarce; buyers meet market prices unhesitatingly on irregulars, and often give premiums to get quick shipment. A slight increase in fall contracts is noted and this has encouraged knitters to look for at least a fairly active May.

The chief demand is for summer shades in women's hosiery, lines retailing at $1 or less being preferred. While consumer trend is still toward low-price lines and probably will remain there for a few weeks, observant maunfacturers note a slight increase in call for the medium-price lines. This tendency is not strong enough to indicate any definite turn, but it tallies with the growing belief that late summer will bring a slow trading-up.

It is significant that both jobbers and retailers pay more attention to quality than they did a month ago; the present sentiment as one knitter put it, is to get "better goods at the same price."

Men's hosiery moves spiritedly, but competition is keen and there is much underselling. While manufacturers claim distress merchandise is beginning to clear, this has not helped the market tone, as yet. Certain popular patterns sell steadily at stable prices, but quotations as a whole are hesitant. Men's half-hose made to retail at 25, 35 and—to a much smaller degree 50c.—are in demand, the preference being for neat small designs in lively shades. Vertical effects and allovers both are selling.

Aberfoyle Moves Chicago Office

Aberfoyle Mfg. Co., Philadelphia, announces that the Chicago office of the firm has been moved from 323 S. Franklin St., to new quarters at 222 North Bank Drive.

Army Opens Cotton Stocking Bids

Depot Quartermaster, U. S. Army, Philadelphia, received bids April 28 to manufacture 45,000 prs., size 11 unbleached cotton hosiery for which the department was to furnish the yarn. Prices submitted were: Ellis Hosiery Co., 4c. per pr.; Union Mfg. Co., approximately 31,000 prs., 4.85c. per pr., or 4.80c. on sample B and 4.97c. on sample C.

Bemberg "Combinette" Selling

A new all-Bemberg "Combinette" undergarment for women designed by M. S. Siegel & Co., Inc., manufacturers of Sea Gull underwear, is meeting with outstanding success in their summer line, it is reported by E. W. Siegel. "Combinette" features a brassiere milanese top with a close mesh net chemise. New net panties of Bemberg trimmed with milanese bands recently introduced have also been well received for summer wear, Mr. Siegel says. The "Combinette" and the panties retail at $1.95.

Boston Wool Receipts

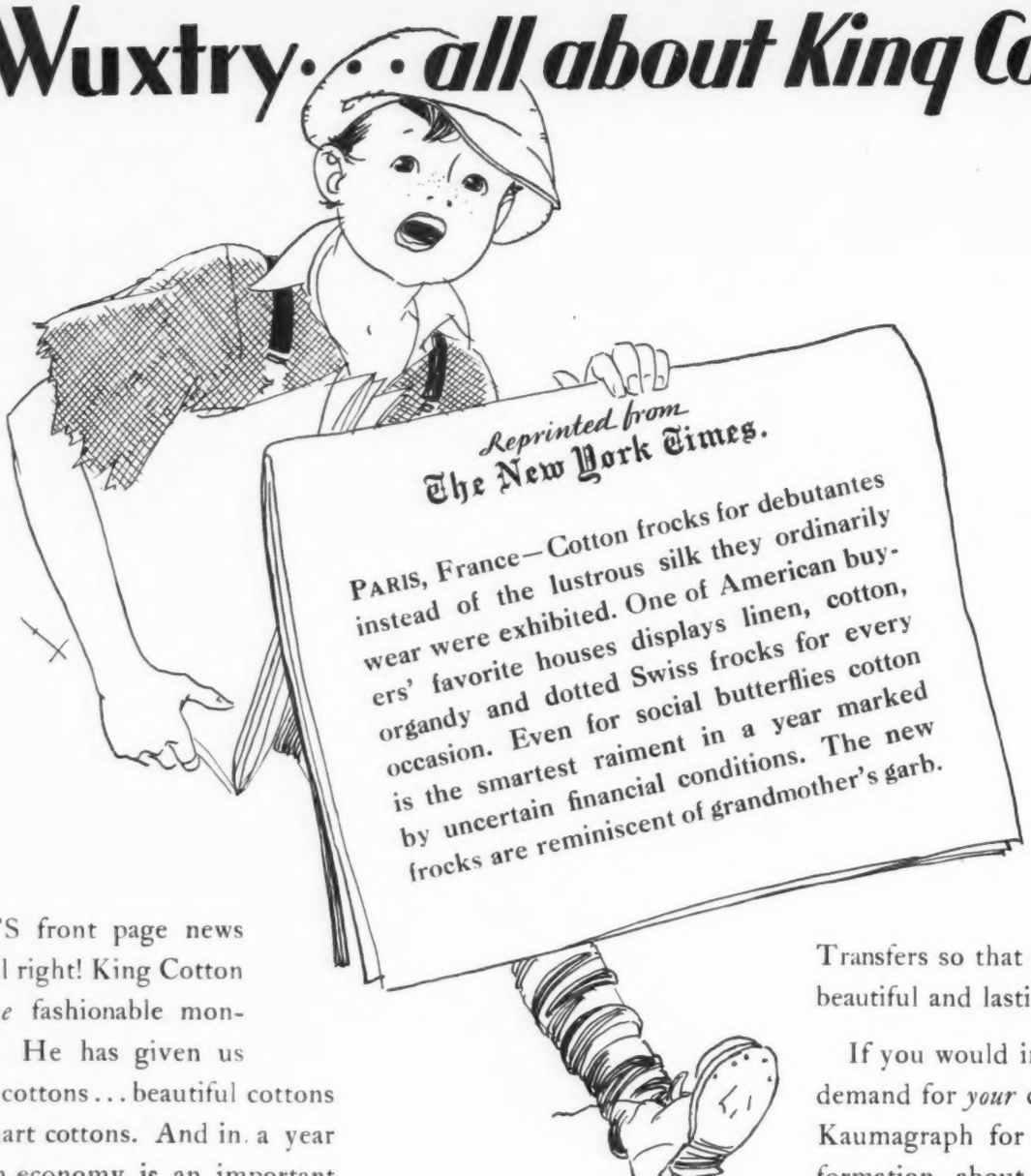
Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended April 25, based upon data compiled by the Department of Agriculture, follow:

	Week Ended April 25	Total to Date 1931	Total to Date 1930
Domestic	1,145,000	27,611,000	22,520,000
Foreign	1,357,000	19,663,000	30,372,000
Total	2,502,000	47,274,000	52,892,000
IMPORTS AT PRINCIPAL PORTS			
Boston	1,357,000	19,663,000	30,372,000
Philadelphia	782,000	13,234,000	23,657,000
New York	378,000	17,446,000	20,858,000
Total	2,517,000	50,343,000	74,887,000

Establish Research Journal

The Arkwrights, Inc., the textile-research association with headquarters in the Johnston Building, Charlotte, N. C., has published the first issue of a new quarterly journal devoted to research. The initial number of the new journal contains an account of the history and purpose of the Arkwrights and extracts from the by-laws, including those dealing with qualifications for membership, time and place of meetings, committees, etc. Several Arkwright tests, most of which have already been published in textile periodicals, have been included in the first issue. Subjects covered in these tests include the percentages of different lengths of staples found in one-inch cotton, effects of temperature regulation on warp yarns in weaving, and comparative moisture content of yarn packed for the market.

"Wuxtry . . . all about King Cotton"


Reprinted from
The New York Times.
PARIS, France—Cotton frocks for debutantes instead of the lustrous silk they ordinarily wear were exhibited. One of American buyers' favorite houses displays linen, cotton, organdy and dotted Swiss frocks for every occasion. Even for social butterflies cotton is the smartest raiment in a year marked by uncertain financial conditions. The new frocks are reminiscent of grandmother's garb.

IT'S front page news all right! King Cotton is *the* fashionable monarch. He has given us new cottons . . . beautiful cottons ...smart cottons. And in a year when economy is an important consideration, they have met with unprecedented success.

But there is more to the story than that. In the last few years cotton manufacturers have successfully introduced new merchandising and advertising methods. Successfully, they have styled their fabrics with increasing skill. Successfully, they have adopted trademarking and identification as indispensable sales allies.

Cottons bearing the mark of the manufacturer discourage substitution. They give the manufacturer the missing link for effective advertising. And, in addition, they stimulate consistent, year-around demand.

In the past 29 years every important development in the trademarking of textiles has been introduced by Kaumagraph. We have assisted many cotton manufacturers to create trademarks . . . register these trademarks . . . apply them to the fabric with Kaumagraph Dry Transfers so that they are clear, beautiful and lasting.

If you would insure valuable demand for *your* cottons, call on Kaumagraph for additional information about trademarking and identification methods. Merely get in touch with any one of the Kaumagraph offices listed below.

KAUMAGRAPH COMPANY
200 Varick Street New York City
Chicago . . . Philadelphia . . . Los Angeles . . . Chattanooga, Tenn . . . Charlotte, N. C . . . Paris, Ontario . . . Paris, France . . . Manchester, England

TEXTILE FINANCIAL NEWS

TEXTILE WORLD ANALYST

◆ Amer. Woolen Moves to Reduce Overhead

THE American Woolen Co. has virtually completed removal of the executive offices from Boston to New York. Estimates place the savings in rental and from reduced personnel at about $400,000 per year. Coincident with the change in offices each department is being studied carefully with a view of reducing overhead through consolidations and application of new methods.

The group of about 17 smaller mills which have been closed will remain so, and efforts will be made to dispose of the properties, while production is concentrated in the large low-cost units. It is also said that the company will concentrate on a smaller number of styles, investigation having shown the possibility of cutting out superfluous styles without impairing the selection.

Financially, formal call will be issued on May 1 for the redemption, on June 1, of the $5,500,000 6½% notes of the Webster Mills, due 1933. On Oct. 1, the $5,500,000 7% Shawsheen notes will be retired, $2,000,000 being already in the treasury.

In the new location in the American Woolen Bldg., 225 Fourth Ave., New York, Lionel J. Noah, president, and Moses Pendleton, general manager, will occupy the renovated offices on the fourteenth floor. Charles H. Silver, sales manager has moved to the sixteenth floor together with his assistants, T. C. Cantrell, Tenny Saunders and John D. Knack. The traffic division of the firm has been shifted to Shawsheen, Mass.

Goodall Worsted Loss

The Goodall Worsted Co., Sanford, Me., reports for the year ended Dec. 31, 1930, a net loss of $576,124, as compared with a net profit of $226,680 in the previous year. After allowing for dividends and adjustments surplus account declined $809,594. At the close of 1930 current assets totaled $2,974,528 and current liabilities only $4,991, leaving working capital of $2,969,537, as compared with working capital of $4,489,862 at the close of 1929. Of the current assets, cash showed a decline of $602,000, inventory a loss of $611,000, and accounts and notes receivable a decrease of $302,000. Investment account, not included in current assets, showed an increase of $870,000.

Botany Worsted Elects

Annual meeting of the stockholders and directors of the Botany Worsted Mills was held April 21 at company offices Passaic, N. J. F. R. Edington was elected executive vice-president and a member of the board of directors; F. A. Burghardt, director, was elected vice-president and Otto E. Kuhn, assistant treasurer, was elected as a member of the board. Other officers remain the same as in the past year.

Officers elected were:

Max W. Stoehr, chairman of the board; Charles F. H. Johnson, persident; F. R. Edington, executive vice-president; F. A. Burghardt, H. V. R. Scheel, vice-presidents; Karl Zimmerman, treasurer; Alfred de Liagre, secretary; O. E. Kuhn and Ralph Hewitt, assistant treasurers; George E. Williams, assistant secretary, and Louis H. Hall, general counsel.

The board of directors consists of:

Harry Bronner, F. A. Burghardt, F. R. Edington, E. F. Hayes, Chas. F. H. Johnson, Otto E. Kuhn, Alfred de Liagre, H. V. R. Scheel, Max W. Stoehr and Karl Zimmerman.

U. S. Testing Declares Dividend

An 8% dividend for 1930 to all stockholders of record on April 30 was declared by the United States Testing Co., Inc., official testing house of the Silk Association of America, Inc., at the recent annual meeting of the board of directors of the testing company. E. J. Stehli was re-elected president of the company, William Hand, vice-president, Ramsey Peugnet, secretary-treasurer, and George A. Post, assistant secretary-treasurer. An addition to the Hoboken plant of the testing company was also authorized, Mr. Stehli stated, to take care of the increasing demand for testing and storage facilities. The company's executive committee will be in charge of building the addition. The board of directors was re-elected.

Financial Briefs

Canadian Cottons, Ltd., Montreal, Quebec, showed a manufacturing profit of $109,407 in the fiscal year ended March 31 last, which compares with $75,574 in the previous fiscal year and $255,946 in 1928-29. Dollar sales in the latest fiscal period showed a decrease of 18% as compared with the previous year, of which 15% was due to lower prices and 3% to smaller volume.

Directors of Bigelow-Sanford Carpet Co. have voted to anticipate payment of serial notes of $1,000,000 maturing November 1934 and 1935 from cash on hand. This will leave $2,000,000 of an original issue of $5,000,000 which does not mature until Nov. 30, 1936 to 1940.

A further liquidation dividend of $5 per share will be paid May 1 to stockholders of King Philip Mills, Fall River, Mass., bringing total disbursement to $50 per share.

Sidney Blumenthal & Co., Inc., reports net loss of $59,088 for the first quarter of 1931, against net loss of $124,021 in the three months of 1930.

New England Textile Stocks

Quotations at "Public Sale" are based on last sales at Boston Public Auctions and Boston Stock Exchange. Bid and Asked prices are latest quotations of dealers.

	Sale	Bid	Asked
Am. Mfg. Co.	52	44	48
Amoskeag	8½	...	...
Arlington	18	18	21
Associated Textile	36½	34	37
Bates	60	55	60
Berkshire, Associates, com.	12½	12	14
Berkshire Associates, pfd.	40½	40	...
Bigelow-Sanford, com.	26	...	...
Boott Mills	120½	75	...
Edwards	80½	58	63
Esmond, pfd.	98	95	99
Farr Alpaca	45	43	45
Hamilton Woolen	40	35	40
Hill	9	8	11
Indian Orchard	20½	16	20
Ludlow	107	105	107
Merrimack, com.	35	25	...
Nashua, com.	7½	7	9
Nashua, pfd.	34½	33	36
Naumkeag	81½	81	82
Newmarket	16½	30	35
Otis	45	45	50
Pacific	18	...	...
Pepperel	79	79	81
Plymouth Cordage	68½	63	66
York	8¼	7	...

Textiles on N. Y. Exchanges

The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ended April 28.

	High	Low	Last Sale	Net Change
Adams Millis	26½	26	26	—½
*American Thread, pfd.	3½	3½	3½	....
American Woolen	8½	7¾	7¾	—¾
American Woolen, pfd.	31½	26½	27	—4½
*Assoc. Rayon, pfd.	59½	58	58	—1½
Belding-Heminway	2¼	2¼	2¼	—¼
Botany Mills, A	2	1½	1½	—½
Cannon Mills	22	20½	20½	—1½
Century Ribbon	4	3½	3½	—½
Collins & Aikman	12¾	9½	10½	—2¼
Consolidated Textile	¼	¼	¼	....
*Courtaulds, Ltd	8	8	8	....
Duplan Silk	12½	12½	12½	....
Gotham Hosiery	12	10½	11	—1
Industrial Rayon	35¾	28½	34	+¾
Kayser, Julius	14½	12½	13	—2
Kendall, pfd.	58	55½	55½	+½
Mallinson	2½	1½	2	—½
Mohawk Carpet	15	12½	12½	—3¼
Munsingwear	22½	22½	22½	—¼
Pacific Mills	19½	17½	17½	—2¼
*Pepperell	79	79	79	+½
*Propper-McCallum	4¼	4	4	+¼
Real Silk Hosiery	17½	15	17½	—¾
*Tubize, Chat B.	7	6½	6½	—1½
United Piece Dye Works.	25½	24¾	25	+¼
Van Raalte	10	10	10	....

*Listed on Curb

Rayon Market Report

(Continued from page 99)

those selling at 70 and 75c. is that the latter two numbers are guaranteed and have the status of standard.

Certain producers are selling rayon six weeks ahead on the more popular of the finer deniers, but business for the most part is spot to two weeks.

Waste Picks Up

Rayon waste showed considerable improvement this week. There is an active call for open bleached, and stocks are limited. Several dealers are selling ahead on these yarns. Thread waste also has shown some activity. Both garnetters and topmakers are buying more freely and they find a better tone among the fabric manufacturers. Waste dealers hope for a few weeks of spirited business before the warm weather lull.

QUOTATIONS

at close of business, Apr. 29, 1931
Prices cover average qualities unless otherwise stated

Cotton Goods

	April 29	April 22	April 30 1930
PRINT CLOTHS			
27-in., 64x60, 7.60	3½–3¾c.	3¾c.	4¾–4½c.
38½-in., 64x60, 5.35	5–5¼c.	5¼–5½c.	6¼–6½c.
39-in., 68x72, 4.75	6c.	6–6¼c.	7c.
39-in., 72x76, 4.25	6¾c.	6¾–7c.	8c.
39-in., 80x80, 4.00	7c.	7–7¼c.	8¾–9c.
BROWN SHEETINGS			
36-in., 56x60, 4.00	5¼c.	5¼c.	7½–7¾c.
36-in., 48x48, 3.00	6c.	6¼c.	9–9¼c.
37-in., 48x48, 4.00	5–5¼c.	5¼c.	6¼c.
PAJAMA CHECKS			
36½-in., 72x80, 4.70	6¼c.	6¼c.	7–7¼c.
36½-in., 64x60, 5.75	5¼c.	5¼c.	6¼–6¼c.
MISCELLANEOUS			
Drills, 37-in. 3 yd.	6½–6¾c.	6½–6¾c.	9c.
Denims, 2.20	12c.	12c.	15c.
Tickings, 8 oz.	15¼c.	15¼c.	18–19½c.
Standard prints	7¼c.	7¼c.	9¼c.
Eastern staple ginghams, 27-in.	8c.	8c.	10c.

Cotton Waste

Peeler comber	8¼– 8½
Peeler strips	7½– 8
Sak. comber	8 – 8½
Choice willowed fly	4 – 5
Choice willowed picker	3 – 4
Sak. strips	10½–11
Linters (mill run)	2¼– 3½
White spooler (single)	7 – 7¼

Cotton Yarn

CARDED (Average Quality)

Double Carded 2c.—4c. higher according to quality

SINGLE SKEINS OR TUBES (Warp Twist)

4s to 8s	$0.17½	22s	$0.21½
10s	.18	24s	.22½
12s	.18 – .18½	26s	.23
16s	.19 – .19½	30s	.24– .24½
20s	.20	40s ex.qual.	.35

TWO-PLY SKEINS AND TUBES

8s-2	$0.18	26s-2	$0.24
10s-2	.18½	30s-2	.24½
12s-2	.19	36s-2	.31½
14s-2	.19 – .19½	40s-2	.33
16s-2	.19½– .20	40s-hi.brk.	.36
20s-2	.20 – .20½	50s-2	.41
24s-2	.23	60s-2	.48

SINGLE WARPS

10s	$0.18	24s	$0.22½
12s	.18½– .19	26s	.23½
14s	– .19	30s	.25½– .26
16s	.19½– .20	40s ex.qual.	.36 – .37
20s	.20 – .20½		

TWO-PLY WARPS

8s-2	$0.18½	24s-2	$0.23 – .23½
10s-2	.18½– .19	26s-2	.24 – .24½
12s-2	.19 – .19½	30s-2	.24½– .25
14s-2	.19½	40s-2 ordin.	.33
16s-2	.20	50s-2	.41
20s-2	.20 – .20½	60s-2	.48

8s-3 and 4-ply skeins and tubes; tinged, 16–16½; white, 17–17½; waste, 15½–16

HOSIERY CONES (Frame Spun)

8s	$0.17½	22s	$0.21
10s	.17½– .18	24s	– .22
12s	.18 – .18½	26s	– .23
14s	.18½– .19	30s tying	.22½– .24
16s	.19 – .19½	30s reg.	.25
18s	.19½– .20	30s ex.qual.	.27 – .27½
20s	.20 – .20½	40s	.33 – .34

COMBED PEELER (Average Quality)

TWO-PLY—(Knitting Twist) Cones

20s-2	$0.32 – .33	60s-2	$0.50 – .52
30s-2	.36 – .37	70s-2	.60 – .62
36s-2	.38 – .39	80s-2	.72 – .74
40s-2	.39 – .41	90s-2	.88 – .90
50s-2	.45 – .46	100s-2	1.08 – 1.10

WARPS, SKEINS AND CONES

TWO-PLY—(Warp Twist)

20s-2	$0.33	60s-2	$0.51 – .53
30s-2	.37	70s-2	.61 – .63
36s-2	.39	80s-2	.73 – .74
40s-2	.41	90s-2	.89 – .90
50s-2	.46	100s-2	1.10

SINGLES

12s	$0.26½	30s	$0.34½– .35
14s	.27	38s	.37½– .38
16s	.27½	40s	.38½– .39
18s	.28	50s	.43 – .44
20s	.28½	60s	.49 – .50
24s	.29½	70s	.59 – .61
28s	.32 – .33	80s	.70 – .72

MERCERIZED CONES—(Combed, Ungassed)

26s-2	$0.49 – .50	90s-2	$1.28 – 1.29
30s-2	.51 – .52	100s-2	1.58 – 1.59
36s-2	.54 – .55	120s-2	1.98 – 1.99
40s-2	.57 – .58	30s	.63
45s-2	.59 – .60	40s	.68
50s-2	.61 – .62	50s	.75
60s-2	.69 – .70	60s	.83
70s-2	.81 – .82	70s	.95
80s-2	.93 – .94	80s	1.15 – 1.17

Cotton Prices and Statistics

FLUCTUATIONS OF FUTURES

	Closed April 23	For Week— High	Low	Closed April 29	Net Chge
May	10.05	10.18	9.82	9.82	—.23
June	10.18	10.21	9.94	9.94	—.24
July	10.31	10.44	10.07	10.07	—.24
August	10.44	10.48	10.20	10.20	—.24
September	10.58	10.61	10.33	10.33	—.25
October	10.67	10.82	10.42	10.42	—.25
November	10.78	10.81	10.54	10.54	—.24
December	10.89	11.03	10.67	10.67	—.22
January	11.01	11.15	10.77	10.78	—.23
February	11.11	11.15	10.88	10.88	—.23
March	11.21	11.34	10.99	10.99	—.23
April	10.05	.....	.....	.....	.....

SPOT FLUCTUATIONS FOR WEEK (Middling)

	New York	New Orleans	Liverpool
Thursday, April 23	10.05	9.84	5.46
Friday, April 24	10.15	9.89	5.62
Saturday, April 25	10.10	9.85	5.60
Monday, April 27	9.95	9.77	5.54
Tuesday, April 28	9.95	9.77	5.54
Wednesday, April 29	9.80	9.68	5.53

FOREIGN COTTONS

Egyptian Cotton

Alexandria Exchange, Apr. 27		Change
May Sak	15.22	—0.36
June uppers	11.59	+0.10

May-June Shipment c. i. f. Boston
(Tariff not included)

Fully good fair Sak	17.65
Fully good fair to good Uppers	13.65

(By Anderson, Clayton & Co.)

Foreign cottons	F. O. B. New York, Cents
Peruvian Tanguis Strict Middling	21
Peruvian Pima No. 1	20
Peruvian Moderate Rough	16
Peruvian Full Rough	21
China Tientsin No. 1	10½
India Rough	7 to 10
India Smooth	7 to 10

(By Bruns-Nordeman Co.)

BASIS MIDDLING

	Saturday, April 25	Saturday, April 18
10 markets average	9.54	9.71
Memphis	8.95	9.15

PREMIUM STAPLES

First Sales from Factors Tables at Memphis

Grade Strict Middling	Prices Steady
1⅛-in.	12.25—12.60c.
1 3/16-in.	13.60—13.85c.
1¼-in.	18.25—18.50c.

CURRENT SALES

	For Week	Prev. Week	Week Before (5 days)
Memphis total	7,466	9,681	8,220
F.o.b. included in total	6,224	6,756	6,471
10 markets	16,430	22,264	22,252

MEMPHIS RECEIPTS, SHIPMENTS, ETC.

	For Week	Last Year	Year Before
Net receipts	1,599	3,903	6,332
Gross receipts	13,201	14,473	16,343
Total since Aug. 1, net	624,431	911,141	830,479
Shipments	33,965	25,267	21,339
Total since Aug. 1	1,196,310	1,611,833	1,605,999
Total stock	226,823	301,656	186,481
Decrease for week	10,762	10,794	4,996
Unsold stock in hands of Memphis factors	22,074	42,836	.....
Decrease for week	2,256	2,914	.....

AVERAGE PRICE MAY-JUNE SHIPMENT HARD WESTERN COTTON

F.o.b. New England

	Middling	St. Middling
1 1/16-in.	12½–12¾c.	12¾–13c.
1⅛-in.	13 –13½c.	13½–14c.
1 3/16-in.	15 –15½c.	15½–16¼c.
1¼-in.	20 –21c.	22 –23c.

Basis on New York, July 10.19c.

SPOT FLUCTUATIONS AND STOCKS

Markets	Middling— April 22	April 29	Sales	Stocks— This Week	Last Year
Galveston	10.00	9.75	4,378	559,932	256,779
New Orleans	9.84	9.68	4,066	734,933	419,050
Mobile	9.35	9.15	486	247,860	8,204
Savannah	9.65	9.44	1,071	362,728	37,867
Norfolk	9.88	9.75	297	81,563	47,613
New York	10.05	9.80	744	227,179	128,087
Augusta	9.56	9.31	708	83,370	72,250
Memphis	8.90	8.65	6,627	221,064	296,749
St. Louis	9.45	9.25	.....	5,982	10,563
Houston	9.90	9.70	5,849	1,042,953	716,397
Dallas	9.30	9.25	2,329	8,724	11,864

DIFFERENCES ON AND OFF MIDDLING WHITE GRADES

	Dallas	Memphis	Montgomery	Augusta	Average
M.F	.75†	1.00†	.85†	.75†	0.88†
S.G.M	.60†	.75†	.75†	.63†	.70†
G.M	.50†	.50†	.60†	.50†	.52†
S.M	.35†	.25†	.35†	.25†	.31†
S.L.M	.50*	.50*	.50*	.50*	.50*
L.M	1.15*	1.25*	1.25*	1.25*	1.24*
S.G.O.**	1.80*	1.80*	2.25*	1.75*	1.96*
G.O	2.45*	2.05*	3.00*	2.25*	2.60*
YELLOW TINGED					
G.M	.40*	.75*	.50*	.50*	0.54*
S.M	.65*	1.00*	1.00*	.75*	0.89*
M.**	1.40*	1.25*	1.50*	1.25*	1.42*
S.L.M	1.90*	1.75*	2.15*	2.00*	1.99*
L.M.**	2.65*	2.00*	2.75*	2.75*	2.67*
YELLOW STAINED					
G.M	1.50*	1.50*	1.5 *	1.25*	1.45
S.M.**	2.00*	2.00*	2.00*	2.00*	2.00
M.**	2.75*	2.50*	2.75*	2.75*	2.70
BLUE STAINED					
G.M.**	1.50*	1.50*	1.50*	1.50*	1.50*
S.M.**	2.00*	1.75*	2.00*	2.00*	1.98*
M.**	2.75*	2.25*	2.75*	2.75*	2.68*

**Grades not deliverable on contract. †On Middling *Off Middling.

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA (IN GREASE)

Fine delne..	$0.26 –$0.27	⅜ blood.....	$0.22 –$0.23
Fine clthg ..	.22 – .23	¼ blood.....	.22 – .23
⅛ blood.....	.25 – .26		

TEXAS AND CALIFORNIA (CLEAN BASIS)

Texas, 12 months	$0.61 –$0.63
California, Northern	.51 – .53

PULLED—EASTERN (CLEAN BASIS)

A.A.	$0.68 –$0.70	B-Super...	$0.47 –$0.52
A-Super....	.55 – .58	C-Super...	.41 – .43

MONTANA, IDAHO AND WYOMING (CLEAN BASIS)

Staple fine	$0.63 –$0.67
Staple ½ bld.	.58 – .60
Fine and fine medium	.58 – .60
⅜ blood	.48 – .50
½ blood	.42 – .45

MOHAIR—DOMESTIC

Best carding	$0.23 –$0.25
Best combing	.31 – .33

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.16 –$0.19
Cape firsts	.18 – .20

FOREIGN CLOTHING AND COMBING (CLEAN BASIS IN BOND)

Australia:	
70s	$0.52 –$0.55
64s	.45 – .48
58s-60s	.40 – .42
(IN GREASE)	
Montevideo:	
58s-60s	$0.20 –$0.21
56s	.19 – .20
50s	.18 – .19
Buenos Aires:	
4s, 40-44s	$0.15 –$0.16
5s, 36-40s	.14 – .15

FOREIGN CARPET (GREASE BASIS IN BOND)

Aleppo washed	$0.22 –$0.24
China: Combing No. 1	.13 – .14
China Filling Fleece	.12 – .14
Szechuen ass't	.12 – .14
Cordova	.14 – .15
Scotch black face	.15 – .17
East India: Kandahar	.17 – .19
Vican'r	.23 – .25
Joria	.23 – .24

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s 36s	$0.77½–0.80
2-24s 40s	– .85
2-26s 44s	.87½– .90
2-28s 46s	.92½– .95
2-30s 48s	– .95
2-32s 50s	.97½–1.02½

(Single yarns 5c. less than above)

2-36s, 58s	$1.22½–1.25
2-40s, 60s	–1.32½
2-40s, 64s	1.35 –1.37½
2-50s, 66s	1.50 –1.52½
2-60s, 70s	1.80 –1.85

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$0.75 –0.77½
2-20s, 48s in oil	– .80
2-20s, 50s in oil	.82½– .85
2-20s, 56s in oil	.92½– .95
2-20s, 60s in oil	–1.12½
2-20s, 64s in oil	1.20 –1.25
1-18s, 46s dyed	95 – .97½
1-18s, 48s dyed	97½–1.00
1-18s ,50s dyed	1.00 –1.02½

(Oil yarns 17½c. less)

FRENCH SYSTEM

1-20s, 58s	$1.10 –1.12½
1-20s, 60s	1.15 –1.17½
1-18s, 64s, dyed	1.37½–1.40
1-26s, 64s	1.20 –1.22½
1-30s, 60s, Warp	1.22½–1.25
1-30s, 64s, Warp	1.25 –1.27½
2-30s, 64s, Fancy mixes	1.47½–1.50
2-40s, 64s, Zephyrs	1.37½–1.40
1-50s, 66s	1.47½–1.52½
2-50s, 66s	1.55 –1.57½
1-60s, 70s	1.80 –1.85
2-60s, 70s	1.90 –1.95

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	$1.00 –1.02½
1-40s, 50-50-60s on cops	1.15 –1.17½
1-40s, 50-50-64s on cops	1.17½–1.20
1-40s, 50-50-64s Australian cops	1.20 –1.25

Underwear mixes, 3c. additional.
Solid color, 35c. additional.

◆

Tops and Noils

TOPS—BOSTON

Fine (64-66s)	$0.83–$0.85
Half-blood (60-62s)	.78– .80
High ¾ blood (58s)	.68– .70
Aver. ¾ blood (56s)	.63– .65
Low ¾ blood	.60– .62
High ½ blood (50s)	.55– .58
46s S. A. and N. Z.	.51– .55
44s S. A. and N. Z.	.50– .52
40s S. A. and N. Z.	.48– .50

TOPS—BRADFORD, ENG. (APR. 24)

Fine (70s)	27½d	¾ bld. (56s)	17 d
Fine (64s)	23 d	½ bld. (50s)	14½d
½ bld. (60s)	22½d	Cross-bred (46s)	12 d
¾ bld. (58s)	20 d		

NOILS—BOSTON

Fine	$0.45–$0.48	High ½ bld.	$0.33–$0.35
Half-bld.	.40– .42	Low noils	.31– .33
Aver. ¾ bld.	.35– .38	Medium colored	.25– .30
Fine colored.	.33– .38		

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.65 –$0.68
Lap, fine colored	.48 – .52
Hard ends, fine white	.51 – .53
Hard ends, ½ blood white	.35 – .38
Hard ends, fine colored	.25 – .27
Hard ends, medium colored	.18 – .20
Card, fine white	.25 – .28
Burr, fine Carbonizing	.28 – .30

OLD WOOLEN RAGS (GRADED FOR MFRS.)

Merinos, Coarse Light	$0.04½–$0.05
Merinos, Fine Dark	.03½– .04
Merinos, Fine Light	.10½– .11
Serges, Blue	.06 – .06½
Serges, Black	.06 – .07
Serges, Red	.08 – .09
Knit, White	.23 – .24
Knit, red	.10½– .11
Knit, Light Hoods	.11 – .12
Worsted, Light	.05 – .05½
Worsted, Blue	.06½– .07
Worsted, Black	.06½– .07

Silk Yarns

THROWN SILK (60 day basis)

	Nominal
Japan organzine, 2 thd. spec. gd. XX. sk. 85%	$3.85
Japan organzine, 2 thd. sp. crack. sk. 81%	3.45
Japan crepe, 3 thd. gd. XX bob. 83%	3.60
Japan crepe, 3 thd. sp. crack. bob. 81%	3.50
Japan crepe, 4 thd. crack bobbins, 78%	3.40
Japan grenadine, 4 thd. sp. grand singles, 87%	5.25
Japan grenadine 4 thd. 85%	5.15
Japan grenadine 3 thd. 90%	6.45
Canton crepe, 3 and 4 thd. ns. 14/16 on bobbins	2.20
Hosiery tram, 3 thd. Japan 90%	4.50
Hosiery tram, 5 thd. Japan, 85%	3.55
Hosiery tram, crack XX 78%	2.90

SPUN SILK YARNS (Terms: net 30)

40/2	$3.15	60/2	$3.35
50/2	3.25	62/1	2.35

Raw Silk

(60 Day Terms. Spot Goods.)

	13/15 White	20/22 White	20/22 Yellow
Super Grand, 86/88%	$3.15	$2.40	$2.35
Special Grand, 85%	2.85	2.30	2.25
Grand XX, 83%	2.00	2.25	2.20
Special Crack, 81%	2.40	2.20	2.15
Crack XX, 78%	2.30	2.15	2.10
Extra Extra, 73%	2.20	....	....
Best Extra, 68%	2.15	....	....

Canton filature, new style, 14/16	$1.45
Canton filature, new style, 20/22	1.40
Tussah filature, 8 cocoon	1.00

NATIONAL RAW SILK EXCHANGE

	Close April 22	For the Week High	Low	Close April 28	Net Chge.
April	2.37	2.42	2.35	....	....
May	2.31	2.31	2.24	2.24	—.07
June	2.30	2.31	2.22	2.23	—.07
July	2.31	2.31	2.21	2.22	—.09
August	2.27	2.30	2.21	2.21	—.06
September	2.28	2.31	2.21	2.21	—.07
October	2.28	2.30	2.21	2.21	—.07
November	2.28	2.30	2.21	2.21	—.07
December	....	2.24	2.21	2.21	....

Total contracts, 1,128. Total number of bales, 11,280. Total approximate value, $3,350,552. Trading unit crack xx 13/15 white 78%.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament	First	Second
50	14	$2.15	$1.95
75	18–30	1.35	1.25
100	18–40	1.10	1.00
125	36–50	1.00	.90
150	30	.70	.67
150	40	.75	.72
150	60	.85	.82
150	75–90	.85	.82
170	24–27	.75	.72
170	60	.85	.82
200	30	.75	.72
200	35–42	.75	.72
300	42–62	.63	.60
450	54–60	.63	.60
600	72–96	.63	.60
900	100–144	.63	.60

Note: So-called "obsolete" yarns, 150/24 and 150/36, still available at 65c.

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
75	$1.35	$1.25	150	$0.75	$0.72
100	1.05	.95	175	.75	.72
125	.95	.85			

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	24	$3.10	65	45	$2.00
25	24	2.85	80	60	1.70
30	24	2.60	100	75	1.35
40	30	2.40	120	90	1.22
52	30	2.20	150	112	1.10
			180	135	.97

ACETATE PROCESS

Denier	Price	Denier	Price
45	$2.25 2.75	120	$1.90
55	2.05–2.55	140	1.30
65	2.45	150	1.40–1.85
75	1.80–2.70	200	1.55
100	1.65–2.45	300	1.50

Rayon Waste

Open bleached waste	$0.13½–$0.14½
Open unbleached waste	.11
Bleached thread waste (mfs.)	.10
Bleached thread waste (misc.)	.07– .08
Colored thread waste	.05
Colored clips	.05

CONVERTED RAYON WASTE

Bleached tops	$0.33–0.35
Unbleached tops	.30
Bleached noils	.12
Bleached garnetts	.13
Unbleached garnetts	.14
Colored garnetts	.12

Silk Waste

Kibizzo Kakai Grand XX	$0.54
Kibizzo Kakai Triple Extra	.48
Frison Grand Double	.52½
Pierced Cocoons	.53

Sloan Reviews Cotton-Textile Progress in Letter to Hoover

PRESIDENT HOOVER received a letter April 29 from George A. Sloan, president of The Cotton-Textile Institute, Inc., of New York, in which Mr. Sloan reviewed for the President the major developments in the cotton industry since a conference with the President a year ago. The practical ceasing of the employment of women and minors at night was termed, "a constructive action in the industry" that would lead to "more stabilized employment."

Mr. Sloan's letter to President Hoover recalls in its opening sentences that a conference was arranged with the President just a year ago, by the President and the Secretary of Commerce, with a number of cotton mill executives. At this meeting problems of the industry were discussed.

The letter continues: "As result of constructive action in the industry a large human service has been given in that employment of women and minors at night will practically cease.

"More definite knowledge as to production, stocks and distribution has been acquired and greater uniformity of running time throughout the industry has been secured with a view to more stablized employment and merchandising. Cooperative action was taken in promoting consumption of the products for the industry and in dealing with other matters of public interest without in any way impairing the competitive character of the industry.

"Indeed there is a feeling that the foundation has been laid for certain improvement and while we are now entering a period of usual seasonal slackness I hope and believe that the mills will continue to observe the sound policies developed subsquently to the conference. They promised much for an industry which for many years has been gravely in need of stabilization."

Estimate of March Cotton Cloth Production

The production of cotton cloth in American cotton mills during the month of March amounted to 575,508,000 sq.yd., according to the estimate of the Association of Cotton Textile Merchants of New York, basing its calculation on the report of spindle hour activity released by the Bureau of the Census of the Department of Commerce.

This total compares with an estimated output of 502,242,000 in February, 1931, and 603,699,000 sq.yd. in March, 1930.

It is pointed out that there were 26 working days in March, compared with 23⅔ days for February.

Chattanooga Golf May 21-22

The annual golf tournament and outing of the Chattanooga Yarn Association will be held at the Chattanooga Golf & Country Club, May 21 to 22, according to a recent announcement. The event will begin with 18 holes on Thursday, the players teeing off at noon, followed by another 18-hole round Friday afternoon. The usual banquet will be held Friday night at which time the golf trophies will be awarded.

Berkshire Cuts Prices on Hosiery Lines

A reduction of 25c. to $1.00 per dozen on general lines of tram and grenadine hosiery, except mesh and Bemberg numbers, effective immediately, was announced May 1 by Berkshire Knitting Mills. The company also changed selling terms from ten days net to 1% discount for ten days, or 30 days net.

Douglas Walker Quits Silk Exchange; to Form Firm

Douglas Walker, first vice-president of the National Raw Silk Exchange, and one of the chief figures in the establishment of that institution, two years ago, confirmed on April 30 reports that he had resigned his post as director of the intelligence bureau of the exchange. Mr. Walker plans to enter the raw silk business more directly as an importer and is organizing a company to be known as Douglas Walker & Co., Inc. He also resigned his post as first vice-president of the exchange, in order to keep his time free for his new activities.

Marion C. Taylor Remains in Business With American Woolen as a Client

Miss Marion C. Taylor is still in business for herself as a merchandise counsellor in New York. The American Woolen Co. has lately become one of her accounts and Mrs. Conway L. Atwater, associated with Miss Taylor, has gone into the company to aid in handling this work. These facts correct the impression given in an item published in our April 18 issue that Miss Taylor was terminating her business to join the American Woolen Co. On the contrary she remains in business as formerly and the American Woolen Co. joins her as one of her clients.

Textile Foundation to Meet on May 4

The next meeting of the officials of the Textile Foundation will be held at the Century Club, New York, on Monday, May 4.

London Wool Auctions Open With Decline

The third series of London wool sales opened Tuesday at declines generally anticipated by the trade. Continental buyers purchased freely; America bought nothing. There was a large selection of crossbreds; fine and low grade relatively firm; medium crossbreds weak. Crossbred decline was from 5 to 15%. Merinos were at par to 5% lower as compared with March closing. Withdrawals were light.

Chemical Industries Exposition in New York May 4 to 9

The thirteenth Exposition of Chemical Industries will open at Grand Central Palace in New York City on Monday May 4 and remain open to Saturday May 9. An unusually complete assortment of chemical making and handling equipment will be shown, a considerable quantity of which is adaptable to the use of textile mills in various departments. One of the features of the exposition will be corrosion resisting materials.

Sears-Roebuck Establishes a Resident N. Y. Buying Office

Sears, Roebuck & Co., Chicago, have established a resident buying office in New York City located in the Sears-Roebuck building at 360 West 31st Street. The persons in this office will work under the direction of the department supervisors of the company and one of them will be representative in the New York market of all the retail stores of the company. The New York buying office of the company will be in a position to deal with manufacturers direct.

Boston Wool Trade Assn. Protests Farm Board in Business

Denunciation of Government competition with private business was contained in a resolution passed by the executive committee of the Boston Wool Trade Association last week. The resolution, copies of which were sent to members of the Massachusetts legislature, follows in part:

"Whereas: Pursuant to an Act of Congress, effective June, 1929, commonly cited as the Agricultural Marketing Act, which by its very nature was bound to fail, because opposed to immutable economic laws,

"Whereas, the administration of this act by the Federal Farm Board has been subversive of 'orderly marketing,' since thereby a new factor of uncertainty has been injected into the situation, and not the less because the Farm Board, in fact as well as in theory, has held final approval of price levels, both in buying and selling, and of merchandising policies—sometimes evidently maintaining prices on a high level and then unexpectedly dropping prices to the lowest level, thereby impairing confidence on the part of manufacturers and the clothing trade, with resultant heavy over-advances which the wool grower, if able, must make good; otherwise, the taxpayers at large.

"Therefore, be it resolved, that we, members of the Boston Wool Trade Association, do hereby protest against the injection of our Government into business in competition with its own citizens, and

"That we make every effort to have the Agricultural Marketing Act amended by the elimination from it of the provisions permitting the lending of public money for private enterprise—a practice unfair, economically unsound and un-American.

The Boston Grain and Flour Exchange, Inc., passed a resolution with similar purport.

Positive Trade Agreements May Be Legal, Says Hines

WALTER D. HINES, chairman of the Board of The Cotton-Textile Institute, stated at the meeting of the Taylor Society in Philadelphia, Thursday, that the general public interest required that production be kept in balance with demand and that under proper conditions such a course was not prohibited by the Anti-Trust Act.

"The Anti-Trust Act prohibits agreements in restraint of trade and commerce," said Mr. Hines. "In an industry with a serious overcapacity, I believe that even the strictest construction of this prohibition based upon the narrowest conception of the purpose and effect of the Anti-Trust Act is not contravened when the units in that industry, through a process of education, come to a realization of the folly of producing regardless of the demand and when the respective units then individually shape their course to balance production with demand."

"But I wish," he continued, "to present the further thought that in such an overextended industry even an agreement among the units therein upon a plan for keeping production in balance with demand should not be regarded as an agreement in restraint of trade and commerce within the meaning of the existing Anti-Trust Act. On the contrary, such an agreement should be regarded as being in promotion of trade and commerce."

Mr. Hines pointed out that he was not dealing with any plan for restricting production so that it should fall below the demand, and added; "That would be contrary to sound principles and sound construction of the law. I am discussing the different and distinct subject of planning to produce with reference to the demand and in keeping with that demand.

"I take it that a law in the very board terms of the Anti-Trust Act should be interpreted in harmony with present-day conditions. Congress employed the broadest possible language in order to express the general principle that agreements in restraint of trade and commerce should be prohibited, but it left it to the courts to decide from time to time in the light of current facts whether or not the effect of a particular arrangement could be regarded as constituting an agreement in restraint of trade and commerce.

"For years there have been repeated expressions on the part of high Government authorities to the effect that the public interest demands that industry should improve its status by establishing a sounder relationship between production and demand. There is very generally in these expressions a clear recognition that the public suffers from a lack of balance in industry and the public interest will be promoted by establishing better balance. Thus Government representatives constantly recognize anew that it is in the interest of sound principles that trade be saved from the disquieting effects of instability. How can agreements made with this intent and with this effect be regarded as violating a law designed to promote the same end?

"We hear much talk of the necessity for amending the Anti-Trust Act. It may well be that the machinery for administering that act is unsound in principle and that its principle should be abandoned. Everybody should desire to prevent agreements which are really in restraint of trade and commerce and that is what the Anti-Trust Act prohibits."

End of Upholstery Strike Brought Nearer

Workers in Philadelphia upholstery plants who have been on strike for three months held a meeting April 26 at Kingston Labor Lyceum, Philadelphia, and voted to return to work, but at the same time voted that they would remain unaffiliated with the United Textile Workers of America. In view of the fact the manufacturers have made this one of the conditions under which workers could come back to the looms it remains to be seen whether they or the workers will change their attitude. The strike began Feb. 2, 1931 and involved more than 2,000 workers who refused to abide by a decision rendered by an impartial arbitration board. The strike was outlawed by the national workers organization which stated the employes had no ground for continuation of the strike.

Georgia Takes Up the "Wear Cotton" Movement

A "Wear More Cotton" campaign, to be held in Augusta, Ga., on May 19 to 22, is being planned by the local chamber of commerce. The campaign will open with an exposition of cotton and its by-products, supplied by the textile mills of the section. Other events planned are a "Cotton Banquet," a "Cotton Style Show" and a "Cotton Invitation Ball."

Invitations have been issued for participation in the "Cotton Festival of Middle Georgia," to be held in Macon, Ga., on May 8 and 9. Details are being arranged with The Cotton-Textile Institute, and the Durene Association. There will be a large street parade, with prizes for the best float; "The Cotton Follies," a theatrical production, and a "Cotton Ball."

Bombay Mill Merger Plan Fails

The plan for a merger of the larger Bombay cotton mills which has been under consideration for some years is reported to have fallen through because the valuations placed upon some of the older mills have not been satisfactory to the stockholders, according to Indian trade advices received by the Department of Commerce from Trade Commissioner George C. Howard at Bombay.

Another plan excluding the old mills was brought up and considered for some time, but the new tariff on cotton goods caused a decided revision on estimated earnings and this second plan likewise fell through.

It is possible that there may be some regrouping of the larger mills, but nothing in the nature of the merger as originally contemplated is anticipated.

National Safety Congress to Be Held in Chicago, Oct. 12 to 16

The next Congress of the National Safety Council will be held in Chicago in the week beginning Oct. 12, 1931. Ignatius MacNulty of the America Woolen Co., chairman of the program committee, Textile Section, is working on plans for that meeting. Members in Maine and Rhode Island are planning local meetings prior to the time of the Congress.

N. Y. Trade Board Holds Textile Symposium

A symposium on Textile Distribution was held by the New York Board of Trade Thursday, with luncheon at the Hotel Commodore, New York City. Robert Blumenthal, president of Commercial Factory Corp., S. Robert Glassford, president of Bliss, Fabyan & Co., and Flint Garrison, director-general of the Wholesale Dry Goods Institute, were the principal speakers. Many leaders in the trade joined in the general discussion.

Sloane Announces August Openings

W. & J. Sloane have announced that their new carpet lines will be shown Aug. 1. This date caused surprise in the trade in view of the June 1 opening date that was decided upon by majority of manufacturers at a recent meeting of the Institute. The Sloane company sells products of Alexander Smith & Sons Carpet Co., C. H. Masland & Sons, Inc., and the Barrymore Seamless Wiltons. It is apparent that the firm believes later opening will find buyers in a more receptive mood to place fall orders than in June.

Wyomissing Industries Rewards Employees' Suggestions

With J. Earl Ruthardt as editor, the Wyomissing (Pa.) Industries, Inc., have begun publication of a monthly newspaper of four pages. The first issue states that in the last year prizes totalling about $1,000 were paid to those making improvement suggestions in the various plants, Berkshire Knitting Mills, Textile Machine Works and Narrow Fabric Co. The 1,201 suggestions came from 647 employees and 22% of them were adopted and their authors rewarded.

AMERICAN
ENKA

. . and

the fate of PRODUCTION

hangs by a thread

POOR YARN plays havoc with the best running production schedule. To get the most out of your mill and keep it running continuously, you need strong, fast weaving yarn that will run on a practical non-stop basis.

Both fabric and hosiery mills rate Enka yarn A-1. Its strength and its freedom from broken filaments increase production and they assure a satisfactory finished product. There are no weak spots, no yellow threads to take the dye unevenly, no sagging, no stretching.

You can't buy better yarn than Enka. Join the quality group of operators now using it in high grade, successful fashion fabrics. To quote from a recent letter: "This yarn we have already warped and slashed and are pleased to advise you that the running qualities were as good, if not better, than similar yarn which we have been using. It might also be of interest to you to know that your 150-24 as well as your 300-42 is running very nicely."

Our technical department will give you ideas and constructive help beyond mere raw materials. If there is any question in your mind as to the merits of our yarn, we will put on a trial run at your own mill with one of our technical men in charge.

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Mitchell Addresses Philadelphia Chemists

Textile manufacturers should assume a different attitude to their employes than in the past. Conditions have changed in the textile and other industries and this involves greater responsibility for the management. This thought was brought to the attention of his hearers by Allen R. Mitchell, Jr., head of the Shackamaxon Mills, and president of the Philadelphia Textile Manufacturers Association, in an address delivered before a meeting of the Philadelphia Section of the American Association of Textile Chemists and Colorists, April 26. Mr. Mitchell said:

"The time is past for employers to think of their business interests merely in terms of buildings, machinery and profits. From now on they must think principally in terms of human beings, of the persons in their employ. The first consideration of the textile manufacturer must be his responsibility not only for those he has employed, but for their families."

Other speakers were Wilfrid Gray, Gray Line Hosiery Mills, Eddington, Pa., Charles Garrett, representing the Industrial Relations Committee of the Philadelphia Chamber of Commerce and Elmer C. Bertolet, professor of chemistry and dyeing at the Philadelphia Textile School. Charles A. Selbert acted as chairman and Percival Theel, secretary of the meeting which was held at the Engineers Club.

Textile Chemists Enjoy Varied Program

The April meeting of the New York Section, American Association of Textile Chemists and Colorists, held Friday evening, April 24, proved to be of a particularly unusual and varied nature. Following an informal dinner at the Chemists' Club, members of the society inspected the Exhibition of the Science and Art of Color in the Museum of Science and Industry in the City of New York, and then listened to a paper delivered by Lieut. H. Kirsner, of the Philadelphia Quartermaster Depot of the War Department, on the subject of the "Development of Fast Colors for Military Uniform Fabrics."

In his address, Lieutenant Kirsner traced briefly the evolution of uniforms from those of bright colors worn in the earlier days of hand-to-hand combat, to those of inconspicuous shades necessitated by present-day warfare. He then outlined the progress made by the U. S. War Department during the last few years in developing new uniform fabrics for officers and enlisted men. Among the interesting points brought by Lieutenant Kirsner were that his department has established standards for raw materials, developed entirely new fabrics which are superior and lower in cost than those formerly obtained abroad, has adopted a shade of khaki which can be supplied in fast colors, and has established specifications and tests which insure the durability and uniformity of fabrics and shades. In the discussion which followed his talk, the lieutenant pointed out that colors which are fast in one locality may not be in another, and described simple tests made at the Quartermaster Depot to determine suitability of uniform fabrics.

Robert H. Gaede, chairman of the local section, presided at the meeting which was attended by about 60 members and guests of the society. It was announced that the annual meeting of the association will be held this year in Boston, on December 4 and 5.

Phi Psi Plans Attractive Convention for May 8-10

The Phi Psi Fraternity, which has a membership of about 2,000 persons active in the textile industry, this year will hold its annual convention on Cape Cod, the central point being Sagamore, as previously announced. The convention dates have been set for May 8, 9, 10. Rudolph C. Dick, vice president and treasurer, Louisville (Ky.) Textiles, Inc., is scheduled to deliver the principal address at the banquet on May 9.

On the first day of the convention the members will lunch at the University Club, Boston at 13.30 p.m. leaving at 2 p.m. for the Bradford Arms, Sagamore. Dinner will be served there at 6:30 p.m., followed by a motion picture show. On the Saturday there will be a business meeting at 9:30 a.m., luncheon at 1 p.m., with the afternoon set apart for swimming, golf and baseball. The convention dinner will start at 8:30 p.m. Saturday evening. On Sunday there will be an automobile trip down the Cape, with a shore dinner at 11:30 p.m. The nominating committee of W. H. Hart, W. A. Kennedy and A. E. Snyder has prepared the following slate of officers for this year; vice-president, Harold Cochrane, Delta, Fitchburg, Mass.; treasurer, Edwin N. Ferrell, Delta, Boston; editor of quarterly, John A. Miller, Jr., Delta, Taylorsville, N. C.

Reducing Picker-Stick Breakage

(*Continued from page 79*)

out. First let us give some attention to the manner in which the picker stick rubs against the picker. When the stick begins to move the shuttle forward by pressing the picker forward, it will be noted that the stick connects with the picker near the top of the stick. As the stick comes forward, the point of contact between the stick and the picker moves in one direction until the stick has completed the first half of its movement. After this, the point of contact moves in the opposite direction. Now if we arrange matters so that the stick does all of its work in the first half of this movement, we wear the stick only in one direction. The result will be that we wear into the grain of the stick and cause a split just below the picker. About 50 per cent of all breakage of picker sticks is caused in this manner.

Now if we manage so that part of the work is done before the stick reaches the center of its movement and part is done after it reaches this point, we are wearing on a longer surface and in both directions. Naturally this will distribute the wear and give the stick a longer life. The relative merits of the long and the short sweep have been discussed many times, and there is something to be said on each side; but we cannot get away from the fact that the short sweep wears the picker stick over a short surface and in only one direction—which can only mean broken sticks.

Silk Industry Plans "Truth in Fabrics Group"

Organization of a "Truth in Fabrics Group" to assure retailers and the public of the originality of fabric designs offered for sale, has been proposed by the Anti-Design Piracy Group of the Silk Association of America, Inc. as the nucleus of a comprehensive campaign to be undertaken to eradicate design piracy from the market. The entire textile industry including rayon, cotton and wool divisions, will be invited to join this group, to register their designs with the Design Registration Bureau, and to label their registered fabrics for the protection of the public.

The Truth in Fabrics Group as outlined by Sylvan Gotshal, counsel to the Anti-Piracy Group, will have as its purpose the promotion of truth in the description of fabrics, protection of the consumer from imitation of original designs, and the unification of effort toward the eradication of piracy of designs. Members will register all designs with the Design Registration Bureau. Tags attached to fabrics of members of the Truth in Fabrics Group will enable purchasers of textile fabrics to assure themselves of the originality of a design. Special distinctive tags will be furnished for each branch of the textile trade. As a further curb on the activities of the design pirate, it is proposed to expose publicly the activities of individuals or firms who copy original designs, and to sell all fabrics upon a contract containing a provision guaranteeing honest use of the design sold. The executive committee of the Anti-Design Piracy Group includes Sol C. Moss Finsilver, Still & Moss; Horace B. Cheney, Cheney Brothers; Frederick H. Knight, Susquehanna Silk Mills; William Menke, Menke, Kaufman & Co., Inc.; Henry E. Stehli, Stehli Silks Corp.

Wisconsin Rejects 44-Hour Law for Women Workers

The State assembly of Wisconsin on April 15 killed the Nixon bill to established a 44-hour week for women workers, by a vote of 65 to 30. The present law provides for a 50-hour week for women.

TYPES OF FABRIC:

100% BEMBERG
One-Bar Tricot
Two-Bar Tricot
Milanese

BEMBERG and SILK
Two-Bar Tricot
Deniers
25-30-40-52-65-80-100

223 Styles of undergarments made of Bemberg by 17 manufacturers

1931 IS A BEMBERG YEAR

The 19 new warp-knit fabrics of Bemberg have revolutionized the underwear market.

Lower yarn prices have put high quality, high style garments for men, women and children in popular price ranges.

Lower retail prices are adding a market of new millions to the millions of women who already know from satisfied experience the beauty, the softness, the unequalled wear of undergarments of Bemberg. American Bemberg Corporation, 180 Madison Avenue, New York.

"MADE OF BEMBERG" IS A STAMP OF QUALITY

Stanton New Textile Printing Group Head

Fred Stanton, Sussex Print Works, was elected president of the National Association of Textile Printing Colorists at the annual meeting held April 25 at the Alexander Hamilton Hotel, Paterson, N. J. The following vice-presidents were elected: Charles Staye, printing superintendent, Cheney Bros., South Manchester; H. C. Copithorne, superintendent, Gilmore's, Somerville, Mass.; Edwin Farnsworth, superintendent, Apponaug Co., Apponaug, R. I.; Edward W. Roegner, manager, Cretona Print Works, Clifton, N. J.; Howard Revell, superintendent Glasgow Print Works, Glasgow, Conn.; James Gyslop, Cretona Print Works, Clifton, N. J. Leon Wheeler, superintendent of the Jewett City Textile Novelty Co., was elected treasurer of the association, and Fred L. Babcock, of Cambridge, Mass., editor of *Fibre and Fabric,* was reelected executive secretary.

Spinning Angora Rabbit Wool in the North West

(*Continued from page 82*)

Mixture with sheep's wool, silk, rayon and other fibers has been practiced by European mills. This adulteration of imported Angora wool garments has been partly prompted by the 50% ad valorem duty. The tariff is said to be almost prohibitive to importation of 100% rabbit wool goods. The Bishops have thus far followed the policy of manufacturing 100% rabbit wool yarn, believing it economically preferable in present competition with European goods.

Expensiveness of the raw wool naturally limits the market for the goods of this material. Prices range from $3 to $8 per pound. Qualities of lightness and warmth create a demand which, though limited, may be of considerable size in this country.

Size of clipping from a rabbit as compared to a sheep presents the problem of dealing with a large number of growers. Thus far, the Oregon Worsted Mills have purchased on a contract basis with a large grower and concentrated their purchasing with him. Angora rabbits are first clipped at three months of age and the conventional four clippings a year mean 10 to 12 oz. per rabbit annually. Education of the growers to keep the fleece clean and unmatted through correct care of the rabbit, is very important, according to Clarence M. Bishop.

Commercial production of rabbit wool yarns is about to be started by the Laine De Luxe Corp. at its factory at Laurel, 7½ miles north of Bellingham, Wash. Earl L. Bernier of Bellingham is president and manager of the company. Construction of the first unit of a plant which represents an ultimate outlay of $125,000 is being rushed to completion. It is said that the entire production of the plant this year has been contracted for. The company will buy its wool on the open market and has 700 rabbit growers on its list, it is said. The first unit of the plant will employ 20 operatives. H. James Hart is vice-president and Howard S. Wallace is secretary-treasurer.

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Business News

Bedaux New York Office in New Location

The Chas. E. Bedaux Co. of New York, Inc., has removed its office to 22 East 40th Street, New York.

Sergeant Moves into Empire State Building

E. M. Sergeant Co. has removed its office to the newly opened Empire State Building, 34th Street and Fifth Avenue, New York.

Bristol's Pittsburgh Office in New Location

The Pittsburgh branch office of the Bristol Co., of Waterbury, Conn., will move from present location in Frick Building to new offices in Kopper's Building on May 1.

Leffel Turbine Installed by Holyoke Water Power Co.

The Holyoke (Mass.) Water Power Co., with 139 years of hydraulic experience, has under construction a new hydro-electric development involving installation of a 6,000 hp. turbine made by James Leffel & Co., Springfield, Ohio. This will operate under 30 ft. head of water at 128 r.p.m.

Operating Personnel of Reorganized Cocker Machine & Foundry Co.

Following the recent announcement of the reorganization of the Cocker Machine & Foundry Co., Gastonia, N. C., of which George B. Cocker has been elected president, the operating personnel will consist of the following: D. L. Friday, assistant to president; E. K. Whitener, plant superintendent and engineer; J. C. Baber, shop foreman; C. R. Lecroy, foundry foreman; T. F. Suggs and J. D. Spencer, draftsmen.

Garcelon Now Manager of Control Engineering for Westinghouse

The appointment of G. H. Garcelon as manager of the control engineering department of the Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., was announced recently by R. S. Feicht, director of engineering of that company. Mr. Garcelon succeeds J. H. Belknap, who has been transferred to the engineering division of the Pittsburgh district office of the company.

Buck Dryer Corp. Concentrates Facilities at Manchester, Conn.

Lucien Buck, president of the Buck Dryer Corp., has announced that the offices, laboratories and shops of the corporation will, on and after May 1, be located at Manchester, Conn., providing increased productive capacity, the need for which has been apparent for some time.

Acquisition of adequate facilities at Manchester has made it possible to bring together engineering, research, sales and manufacturing departments, thus more closely coordinating all activities.

E. E. Way Succeeds F. M. Herrick as Advertising Manager for Taylor Instrument Cos.

Fayette M. Herrick, who for many years administered the affairs of the advertising department, of Taylor Instrument Companies, Rochester, N. Y., has decided, in order to improve his health, to devote all his time to farming, except will continue his connection with the company in the capacity of editor of Tycos-Rochester.

Elmer E. Way has been appointed advertising manager in Mr. Herrick's place.

Vice-President of Rogers Brown & Crocker Bros. Goes to Swann Corp.

F. W. Miller, formerly vice-president of Rogers Brown & Crocker Bros., Inc., has been appointed vice-president of Swann Chemical Co., it was announced by Theodore Swann, president of the Swann Corp. Mr. Miller will have charge of the Cincinnati office of the Swann Chemical Co., recently established in the Carew Tower in that city. Mr. Miller had been connected with Rogers Brown & Co. and their successors, Rogers Brown & Crocker Bros., Inc., for 35 years. Mr. Miller will be in direct charge of the sale of ferro phosphorus. In addition he will handle sales in the Cincinnati territory of chemicals, abrasives and lampblacks for the several Swann subsidiaries. J. R. Morehead, also previously with Rogers Brown & Crocker Bros., Inc., as assisltant to Mr. Miller, has joined the Swann organization and will continue his association with Mr. Miller at the Cincinnati office.

Business Literature

Spoolers. Barber-Colman Co., Rockford, Ill. Results of 189 weeks of weave room tests of automatic spooler described with charts and specifications in April issue of "The Weaver's Knot."

Control. Brown Instrument Co., Philadelphia. Illustrated folder lists features and explains advantages of new automatic controller, model 1001-8.

Power Transmission. Link-Belt Co., Chicago. A wide range of Link-Belt transmission equipment described and illustrated in 20-page booklet.

Worsted Looms. Crompton & Knowles, Worcester, Mass. Characteristics, price and specifications of high-speed worsted loom explained in folder which also carries sample of worsted made on this machine.

Hosiery Machines. Louis Hirsch Textile Machines, Inc., New York City. The costliness of continuing to use obsolete equipment is emphasized in folder promoting Lieberknecht machines.

Spooling, Beaming and Weaving Outfits. Warp Compressing Machine Co., Worcester, Mass. Photographs, diagrams, specifications and reprints from trade press lend interest to folder on jack-spooling, dry-dressing beaming and direct-weaving.

Luxury Linings Reach Volume

. . . Acele is the Yarn to Use

A MARKET change has come. Today the men's clothing business is being turned inside out on the question of linings. No doubt about it, linings . . . even in volume price lines . . . must be luxurious.

In the first swing of this change comes ACELE . . . a new and better yarn by du Pont. Sound factors in the trade are turning to it. From the mills point of view alone there are six reasons for this preference.

1—ACELE is packaged efficiently. More yardage per spool . . . fewer knots . . . spools packed as carefully as eggs.

2—ACELE warps are exceptionally clean.

3—Increased tensile strength means more first-quality fabric.

4—ACELE'S wet strength is valuable during sizing.

5—Its natural elasticity accommodates sudden strains.

6—ACELE is sturdier and softer. That's why it produces more luxurious fabrics for any purpose!

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NEWS about MILLS

Cotton

Tallassee (Ala.) Mills have placed order with the Otis Elevator Co., for elevators in the four-story addition to the picker building. The project is about 10% complete.

Firestone Cotton Mills, Fall River, Mass., have advanced the production schedule at their plant, covering both day and night shifts, adding half a day to the former, and a night to the latter. The new basis will be continued for a number of weeks to come.

Foster Spinning Co., Fall River, Mass., is running an overtime night shift at its mill, and will continue on that basis for an indefinite period.

Massachusetts Thread Mills, Inc., Fall River, Mass. Negotiations have been started for the purchase of the local **Conanicut Mills** of this company, on Bay St., which have been inactive for some weeks past. Interests represented by James Seligman, Fall River, attorney, propose to take over and resume operations at the plant at an early date, if satisfactory arrangements can be made.

White Oak Cotton Mills, Greensboro, N. C., are running on a four-day week schedule, and will continue on that basis for an indefinite period.

Bonnie Cotton Mills, Inc., King Mountain, N. C., have just installed in their opener room Breton Minerol process equipment for conditioning their cotton. This was furnished by Borne Scrymser Co., New York.

Manville Jenckes Co., Gastonia, N. C. Zenas W. Bliss, former lieutenant governor of Rhode Island, who is now receiver for this company, appeared last week before the Gaston County commissioners to ask for a revaluation of the concern's property in Gaston County. The company has one large plant here and another at High Shoals, and the valuation on the County books is placed at $4,000,000.

Edna Mills Corp., Reidsville, N. C., recently granted a charter to manufacture rayons and other fabrics, in the plant of the former **Edna Cotton Mills,** has begun operations, with C. L. Lewis as superintendent.

***Pilot Mills Co.,** Raleigh, N. C., recently chartered to acquire the local Pilot mill of the **Consolidated Textile Corp.,** is planning for the early conversion of the plant for rayon fabric production. It will be closed down at once to carry out the change. Early resumption of operations is planned.

***Caromount Mills, Inc.,** Rocky Mount, N. C. Contract for building addition to the plant has been let by J. E. Sirrine & Co., mill engineers, to C. M. Guest & Co., of Anderson, S. C. The amount involved was not given out. The new building will be of brick, one story, 183x218 ft. with boiler room.

Primrose Tapestry Co., Inc., Philadelphia, Pa. About 10,000 sq.ft. of floor space on the first floor of the mill of this company at 23d St. & Allegheny Ave., has been leased by the McQuay-Norris Mfg. Co., Philadelphia, which will occupy for mechanical service.

Monarch Mills, Lockhart, S. C., have recently installed three Hermas shearing machines and three Hermas improved vertical brushing machines with the new V-belt drive, through the Carolina Specialty Co., Charlotte, N. C.

Williamston (S. C.) Mills, of the Gossett group, are having their spinning equipment overhauled. The Dixie Spindle & Flyer Co., of Charlotte, N. C., is doing the work.

**Indicates previous mention of project.*

Wool

Pioneer-Pacific Woolen Mills, Long Beach, Calif., with 115 employees, are working two-thirds capacity production on one shift.

Amos Abbott Co., Dexter, Me., has just received sufficient orders to keep it operating at full capacity with a crew of 250 to 300 men and women for several months.

Hudson (Mass.) Combing Co. Fire starting in a picker machine in its Cherry St. plant on April 21, caused considerable damage to the machinery, equipment and stock. A week previous fire broke out in a similar way and caused about $2,000 damage.

Rayon-Worsted Woolen Mills, Monson, Mass. The main building of the century old idle Branch mill on Elm St., which suspended operations about four years ago, was destroyed by fire on April 23, with a loss of $10,000. It was uninsured. The town has a tax title on the property. Two adjoining buildings, one used as an office and storeroom and the other for spinning, were saved.

Hillsboro (N. H.) Woolen Mill Co., suitings and overcoatings, is running on a capacity basis, with day and night forces, and expects to hold to that schedule for some time to come.

Spotswood (N. J.) Rug Mills, Inc., recently organized with a capital of $100,000, will be represented by Jerome R. Epstein, 58 Broad St., Elizabeth, N. J., an attorney. The new company will take over the former plant of the DeVoe Snuff Co., Spotswood, and adjoining lake property, and will remodel and equip for a new mill. The property will be secured under lease. Max Catron and William Juchnow are principal incorporators of the new organization.

Buffalo Spinning Mills, manufacturers of wool and merino sweater yarns, and formerly of Clarence, N. Y., have moved their plant to Silver Creek, N. Y.

Patons & Baldwins, Ltd., Halifax, Yorkshire, England, and 888 Dupont St., Toronto (Ont., Can.) have let contracts for the erection of a woolen manufacturing plant in York Township, adjoining Toronto. The plant is to consist of main building, dye house and power house, with dimensions roughly 300x180 ft., reinforced concrete and brick construction. Main building is to be two stories and basement, with provision for two more stories at a later date.

Gulf Textile, Inc., Rimouski (Que., Can.), a woolen mill which has been closed for the last six years, will resume operations in the near future.

Knit

McDonough Hosiery Mills and **H. B. Carmichael Hosiery Mills,** of McDonough, Ga., are running full-time. Both plants are operating at capacity with a good supply of advance orders that will carry them well into the summer.

Elk Mills (Md.) Fabrics Co. is considering an expansion and improvement program at its mill, including installation of a new dyeing system and equipment. The company is also considering construction of a hydroelectric power plant on Big Elk River, for service at the mills.

Mitchell Knitting Mills, Inc., Buffalo, N. Y., knit goods, sweaters, etc., have made a general assignment to Walter C. Newcomb for the benefit of creditors. The company lists its assets at $336,474 and liabilities at $247,033. The Manufacturers & Traders Trust Co., Buffalo, brought an action in the County Court to foreclose on a first mortgage of $200,000 on the plant and equipment.

Superior Silk Mills, Inc., Gloversville, N. Y., and **O'Melia Silks, Inc.,** Fonda, N. Y., have consummated a merger and in future will operate under the name of **Superior Silk Mills, Inc.** The product of O'Melia Silks, Inc., which has heretofore been distributed through the Franklin Knitting Mills, Inc., as Fashionknit Fabrics, will henceforth be known as the product of Superior Silk Mills, Inc. There will be no change in the manufacturing organization of the two concerns, and L. M. O'Melia, president of the firm bearing his name, will continue in his usual capacity as in the past.

High-R-Mode Co., Philmont, N. Y., has been incorporated with $10,000 capi-

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—Hub of the Rayon Industry

Here . . . is everything needed for main or branch mills. Surrounded by 11 rayon plants, the raw material is near at hand. Criss-crossed by three great trunk lines, fast rail distribution radiates to the nation. Adequate power at low rates from hydro-electric and steam stations. Ideal labor situation. Delightful climate. A thoroughly modern and progressive community of likable, neighborly people.

The opportunities here are really amazing. Investigate them!

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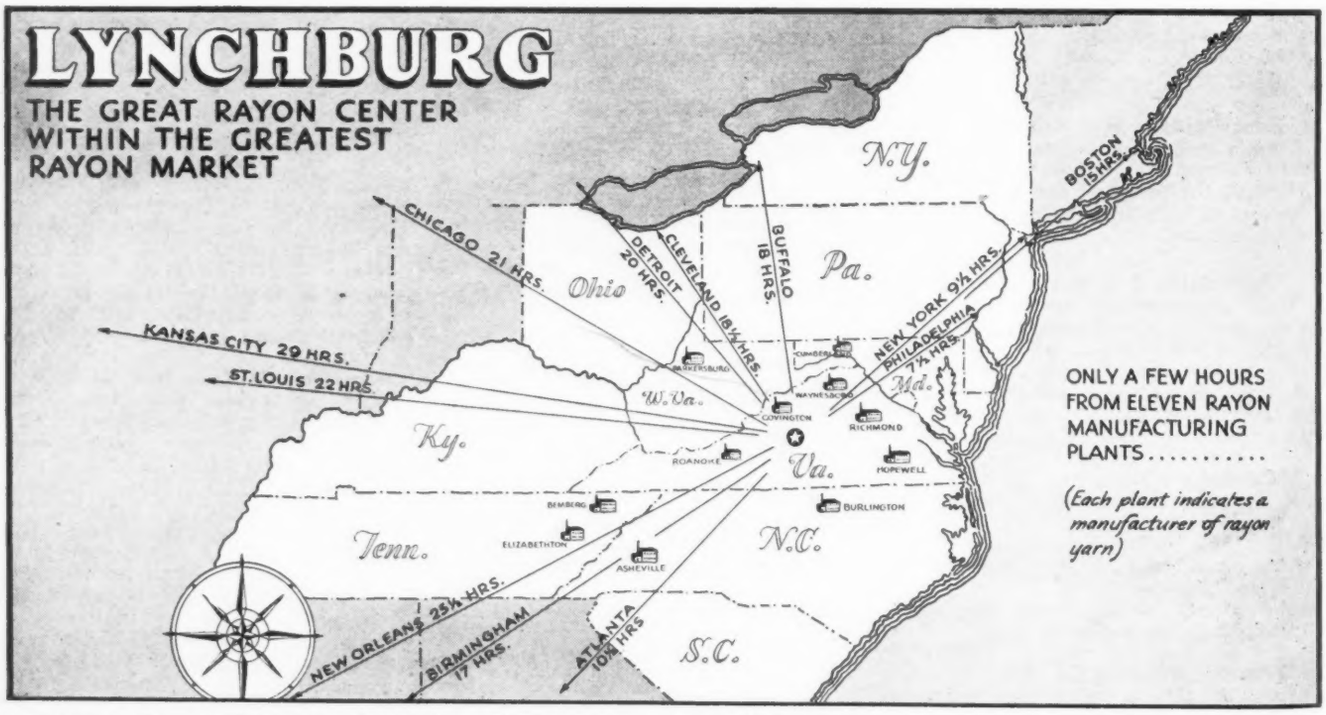

LOCATED FOR QUICK LOW COST DISTRIBUTION TO A POPULATION AREA OF OVER 49 MILLION PEOPLE . . .

tal to manufacture knitted fabrics, the directors being Frank B., Lewis F. and G. Harold Harder, all knit goods men.

Elk Knitting Co., 54 West 21st St., New York, has filed schedules in bankruptcy showing liabilities of $41,192, and assets of $29,649.

Princeton Rayons, Inc., 150 Madison Ave., New York, are considering the early construction of a new plant at Scranton, Pa., to cost over $200,000, with equipment. It is proposed to provide facilities for the employment of close to 300 persons.

Tarboro, N. C. Ben C. and C. W. Mayo have started a small knitting plant on a small scale. Misses' and children's hose are being knitted.

Great Lakes Knitting Mills, Inc., Cleveland, Ohio, recently chartered with a capital of 250 shares of stock, no par value, to operate a local knitting mill, will be represented by Mooney, Hahn, Loeser, Keough & Beam, National City Bank Building, Cleveland, attorneys. Eugene H. Freedheim and D. E. Frye, Cleveland, are the principal incorporators.

Harrisburg, Pa. A. B. Beck is reported installing Banner machines in the building formerly owned and occupied as a hosiery mill by the **Shearer Mfg. Co.** Mr. Beck, it is stated, will manufacture men's fancy half hose. He was formerly general manager of the York (Pa.) Knitting Mills Co.

Ma-Ro Hosiery Mills, Inc., Philadelphia, Pa., have leased the fifth floor of their building at 28 North Third St., to the Liberty Leather Goods Co., Philadelphia, which will use for its business. The space totals about 6,000 sq.ft.

Stadium Hosiery Co., Inc., Providence, R. I., recently chartered with a capital of 200 shares of stock, no par value, by Samuel Temkin, 154 Prospect St., Providence, and associates, is said to be planning the operation of a local knitting mill.

Silk

Van Raalte Co., Saratoga Springs, N. Y., plans immediate resumption of the manufacture of silk garments and a consignment of new machinery is being installed in the plant prior to the reopening.

Southern Silk Mills, Inc., Kernersville, N. C., recently purchased four additional Sipp-Eastwood winders through the Carolina Specialty Co., Charlotte, N. C.

Dan City Silk Mills, Inc., Danville, Va., owing to increased demand for rayon crepe and georgette, will shortly speed up operations, according to a statement of W. F. Williams, superintendent. The company now has an operating force of 160 persons and is expecting to take on 40 more during the next few days.

Bruck Silk Mills, Ltd., Cowansville (Que., Can.) are running on a capacity day-time schedule at their local mills, with night production on a basis of about 50% of capacity, and expect to hold to this schedule for an indefinite period.

B. Edmund David Silk Mills of Canada will establish a mill at Hawkesbury (Ont., Can.) employing at the outset about 50 men, if an agreement arrived at between the town council and the company is ratified by the ratepayers. The company has already secured a two-story brick building at the east end of the town and expects to be shipping products in May.

Rayon

Viscose Co., Parkersburg, W. Va., will operate the spinning department on a slightly longer schedule, because of orders for a new yarn that necessitates longer process.

Finishing

American Yarn & Processing Co., Mount Holly, N. C., is planning rebuilding of pumping plant and filter house at local mill, recently destroyed by fire. An official estimate of loss has not been announced.

New Books

POLICIES AND ETHICS IN BUSINESS. By Carl F. Tæusch; McGraw-Hill Book Co. Inc., 370 Seventh Ave., New York; $5.

Commercial ethics, particularly in their relation to business success, are coming more and more to receive the attention of American industrial leaders. This volume, by the managing editor of *Harvard Business Review* raises the pertinent question of whether American business has developed a sufficient sense of responsibility to set its own house in order, without benefit of legal or other pressure. The book is in a sense, a social history of business thought, reviewing the growth of industry prior to the Sherman Law, and the subsequent relation of that enactment to business. Prof. Tæusch's approach to his subject is thoughtful and detached. He gives interpretations rather than opinions, and achieves a perspective of unusual breadth. Labor relations, trade association activities, price-cutting, re-sale price maintenance, mergers, trade piracy and misrepresentation, are a few of the vital aspects analyzed in his pages. The fifth division of the book, "Self-Regulation in Business," touches the main-spring of his subject and shows very pointedly the progress being made by business, through advertising, curtailment of output, commercial arbitration and other means toward self-government.

As regards the ethics of limiting production, the following comment will prove of especial and timely significance to the textile industry: "Intelligent control of production, on the part of the producer, is as much an ethical right as is that of the consumer to an abundance of goods at low prices. The producer's right can best be safeguarded by his avoiding the two extremes: under- and overproduction."

BANK CREDITS AND ACCEPTANCES. By Wilbert Ward; The Ronald Press Co. New York. $3.50.

This is a revised edition of Mr. Ward's book, "American Commercial Credits," published in 1922. The volume contains most of the original material supplemented by several chapters which consider new and vital aspects of the same general question. The new chapters deal with bank guaranties and other substitutes for bank credits, and tell briefly how to set up acceptance credits in conformity with the Federal Reserve Act and the regulations of the Federal Reserve Board.

FULLING AND CLOTH SCOUTING. BULLETIN NO. 4, WOOL SERIES, PART 1. THE SELECTION OF A WET-FINISHING SOAP. The Textile Research Department, Procter & Gamble, Cincinnati, Ohio.

This latest research bulletin issued by Procter & Gamble is a discussion of soap and its relation to the wet finishing of woolen and worsted fabrics, and should be of great interest to all textile men who are connected with the woolen and worsted finishing industries. Among the subjects treated are the following: Selection of a fulling soap; soap manufacture; properties desirable in a finishing soap, including convenience in handling, quick solubility and body, and resistance to rancidity. The bulletin states that the use of soaps of low titre, such as those with oleate base, has been found to have advantage in fulling and to give satisfactory results from every angle. Specially prepared oleate soaps are said to be easier to handle, to be applied faster and more uniformly, to wet out and penetrate better, to allow fulling to start sooner and to proceed more evenly, to reduce the danger of dry spots and mill wrinkles, and to provide a factor of safety against uneven felting or shrinkage. The bulletin also discusses the type of suds formed by various soaps, and concludes with mention of the various fulling oils which are now available.

SETTLEMENT OF DISPUTES BY ARBITRATION; A Manual on Commercial Arbitration for the Business Man; By Alexander P. Blanck.

A brief and clear exposition of the principles of arbitration as applied to everyday business disputes, pointing out how time, money and good-will may be conserved by employing arbitration instead of resorting to court procedure. Mr. Blanck presents a very convincing case for arbitration; he explains the necessary steps to take in submitting a case to arbitration, the functions of the arbitors, and in general gives a plain description in non-legal terms of present-day arbitration methods.

COTTON FACTS; Edition of 1930; Shepperson Publishing Co., New York.

This 55th edition of the Shepperson year book presents up-to-date statistics on cotton and cotton products, including such divisions as crops, receipts, stocks, exports, imports, visible supply, sales, prices, consumption and manufacturing output. One of the new features is an enlarged rayon section.

NEWS about MEN

✦ EDWARD F. ADDISS has been elected president of Morton H. Meinhard & Co., Inc., textile factors, 51 Madison Ave., New York, to succeed the late MORTON H. MEINHARD, who recently died suddenly, while on a trip around the world. Mr. Addiss has been associated with the Meinhard business for 20 years, and will continue to act as treasurer of the corporation, which post he has held for many years. H. CLIFFORD STEFFENS, who has been identified with the business for eight years, recently has been elected a director to fill the vacancy caused by Mr. Meinhard's death.

✦ JOHN A. SWEETSER, president of Bigelow-Sanford Carpet Co., was re-elected chairman of the board of directors of the Institute of Carpet Manufacturers of America, Inc., at its annual meeting last week. Mr. Sweetser has been identified with the group since it was organized.

✦ CHARLES L. AUGER, president of the National Silk Dyeing Co., and MRS. AUGER, will sail for Europe on the "Paris" on April 30. While abroad, Mr. Auger will inspect and purchase processes and machinery. They plan to visit France, Switzerland, Germany and England.

✦ JOHN E. WHITE, former president of the Graton & Knight Co., Worcester, Mass., has been elected chairman of the board of the Worcester Bank & Trust Co., of which he was formerly president.

✦ HENRY P. KENDALL, president of the Kendall Co., Boston, Mass., is now in California and is delivering a series of addresses at Stanford University's College of Business Administration.

✦ WILLIAM L. RICKETTS, of Ricketts & Shaw, Monson, Mass., and MRS. RICKETTS, have returned from a 21-week round-the-world trip on the S.S. "Empress of Japan."

✦ E. Y. KADIK, vice-president of the All-Russian Textile Syndicate, addressed the convention of the American Cotton Shippers Association, which opened at New Orleans, April 24.

✦ CAPT. ELLIOTT WHITE SPRINGS, vice-president and treasurer of the Fort Mill (S. C.) Mfg. Co.'s plants No. 1 and No. 2, has been elected president of the Bank of Lancaster, S. C., to succeed his father, the late COL. LEROY SPRINGS.

✦ W. G. YOUNG, Albermarle, N. C., will preside over the meeting of the Master Mechanics Division of the Southern Textile Association which will be held in the Parker School Building, near Greenville, S. C., May 8, according to announcement of WALTER C. TAYLOR, secretary of the Southern Textile Association.

✦ COL. LATIMER W. BALLOU, Woonsocket, R. I., textile manufacturer, has been appointed State Bank Commissioner by GOV. CASE to succeed the late GEORGE H. NEWHALL. Mr. Ballou, who is also a director of the Woonsocket Institute of Savings will serve until Jan. 31, 1932.

✦ S. L. HAYES, of Hartsville, S. C., chairman of the Piedmont section of American Association of Textile Chemists & Colorists, will be the chief speaker at the spring meeting of the association at Greenville, S. C., on May 2.

✦ CARL C. MATTMAN, JR., formerly with American Enka Corp., has joined Industrial Rayon Corp. He will be connected with the service department of Industrial as weaving technician and will work on fabric development. Mr. Mattman formerly was works manager of Astoria Silk Works, with which organization he was connected for seven years. He was also affiliated with Chenango Textile Corp. and some time ago joined American Enka Corp. as weaving technician, where he was concerned with fabric development work. He remained with Enka until a few days ago, and at present is located at the New York office of Industrial Rayon Corp.

Textile Calendar

Exposition of Chemical Industries, Grand Central Palace, New York, May 4 to 9, 1931.

Southern Textile Association, Master Mechanics' Division, Parker District High School, Greenville, S. C., May 8, 1931.

Phi Psi Textile Fraternity, 29th Annual Convention, Bradford Arms Hotel, Sagamore, Mass., May 8 to 10, 1931.

American Society of Mechanical Engineering (including Textile Section), general meeting. Hartford, Conn., June 1 to 3, 1931.

Philadelphia Textile School, Alumni Business Meeting, Philadelphia, June 4; Annual "Cruise" and Banquet, June 5, 1931.

Southern Textile Association, Annual Meeting, Isle of Palms Hotel, Isle of Palms, Charleston, S. C., June 12 to 13, 1931.

The Cotton Manufacturers Association of North Carolina, Twenty-fifth Annual Convention, Sedgefield Inn, Greensboro, N. C., June 19 to 20, 1931.

American Society for Testing Materials, Annual Meeting, Hotel Stevens, Chicago, June 22 to 26, 1931.

Chicago Yarn Men's Circle, Annual Golf Tournament, Nippersink Lodge, Genoa City, Wis., June 24 and 25, 1931.

American Association of Textile Chemists and Colorists, Annual Meeting, Boston, Mass., Dec. 4 and 5, 1931.

Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 17 to 22, 1932

✦ L. W. CLARK, general manager Carolina Cotton & Woolen Mills, Spray, N. C., and MRS. CLARK were severely injured in an automobile accident near Greensboro, N. C., April 27.

✦ WALTER HUMPHREYS, Boston, secretary and treasurer of the National Association of Wool Manufacturers, spoke on "Tariff and the Present Business Conditions" in the Unitarian Church, Uxbridge, Mass., on April 20. HAROLD J. WALTER, general superintendent of the Uxbridge Worsted Co., Inc., was chairman.

✦ L. W. PACKARD, treasurer of L. W. Packard & Co., Inc., Ashland, N. H., sailed from Boston recently on the S.S. "Caledonia" for a cruise to the West Indies and Nassau.

✦ WILLIAM O. MCDOWELL, hosiery salesman, has joined the firm of Albert H. Roth Co., 346 Broadway, New York, of which he will be a partner. Several important mills will be added.

✦ W. H. GIBSON, JR., general manager of the Mansfield Mills, Inc., and the Jennings Cotton Mills, Lumberton, N. C., was recently elected vice-president of the Lumberton Rotary Club.

✦ LEWIS B. HORGER succeeds BRANT HOLME as manager of the Bemis Bro. Bag Co. at Ware Shoals, S. C. Mr. Horger was formerly assistant manager at that plant. The change is effective May 1, officials state.

✦ J. H. REANEY, general manager of the Union Mills, Inc., St. Johnsville, N. Y., has returned from a sojourn at Battle Creek, Mich.

✦ SAM ADLER has been appointed superintendent of the Cotton Mills Products Co.'s plant at Mobile, Ala., succeeding T. R. MORTON, who recently resigned.

✦ HENRY BROWN, superintendent of the Rosamond Woolen Co., Ltd., Almonte (Ont., Can.) has resigned. He started work with the Rosamond Co. 27 years ago, first as a designer and for many years as plant superintendent.

✦ FRED A. DUSHAME has been appointed superintendent of the dyeing department of the Wood Worsted Mill of the American Woolen Co., Lawrence, Mass., to fill the vacancy caused by the death of FRANK E. JOHNSON of North Andover, who was asphyxiated in his garage while working about his automobile. EDWIN BUTTMAN has been named assistant superintendent.

✦ ROBERT H. BOARDMAN, who has been connected with the Lorraine Mfg. Co., in Pawtucket, R. I., has arrived at Westerly, R. I., to take charge of the company's local plant as superintendent.

✦ PARKMAN D. HOWE, who has been associated with the Merrimack Mfg. Co., for the last five years, has become assistant treasurer of the Universal Winding Co., Auburn, R. I.

✦ F. ALBERT SAUTER, graduate of textile chemistry of Columbia University, has been added to the faculty of the textile school at Clemson College, S. C.

✦ ROLAND WERNER has succeeded C. A. ROBINSON, who recently resigned as superintendent of the Bedford (Va.) Woolen Mills.

✦ HAROLD R. TURNER is now superintendent of Dunean Mills, Greenville, S. C., succeeding E. A. FRANKS, who recently resigned. Mr. Turner was formerly superintendent of Watts Mills, Laurens, S. C., which is under the same management as Dunean Mills.

✦ Z. C. CALLOWAY, formerly mechanical superintendent of the Dixie Mercerizing Co., Lupton City, Tenn., has returned to his old duties, after being away for one and one-half years. E. W. EVERETT has held this position during that time and has resigned and returned to his former home in south Georgia.

✦ G. F. SHIPP, recently superintendent of the Wilson (N. C.) Cotton Mills Co., is now overseer of the weaving department of the Caromount Mills, Inc., of Rocky Mount, N. C., which is a subsidiary of Sidney Blumenthal & Co., Inc., Bridgeport, Conn.

✦ R. L. PAINTER has assumed his new duties as assistant superintendent of the C. H. Bacon Co., Lenoir City, Tenn.

✦ J. B. COUNCILL, JR., formerly overseer, was recently appointed superintendent of the Piedmont Weavers, Inc., and the Alamance Weaving Co., of Burlington, N. C.

D. F. Burns, Durham (N. C.) Hosiery Mills, elected chairman of Eastern Carolina Section of S.T.A. as reported in our last week's issue.

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✦ LUTHER ATHERTON, who has for some time been overseer of carding and spinning at the Union Springs, Ala., plant of the Cowikee Mills, has been transferred to a similar position at the Cowikee Mills plant at Eufaula, Ala.

✦ M. J. BATES, overseer of the cloth room at the Winfield (Ala.) plant of the Alabama Mills Co., has been transferred to a similar position at the Fairfield (Ala.) plant of the same company.

✦ W. R. BLATT, foreman of knitting at the Duofold Health Underwear Co., Mohawk, N. Y., and MISS MABEL NELBACH were recently married in that village.

✦ JOHN FENESTRA, formerly finisher for the Gleasondale (Mass.) Woolen Co., has lately taken a similar position at the Gordon Woolen Mills, Inc., Newport, N. H.

✦ WATT TUCKER, formerly second hand in spinning at the Entwistle Mfg. Co., Rockingham, N. C., is now overhauler at the Cannon Mills Co., Kannapolis, N. C. He was succeeded by DANIEL WILLIAMS, second hand in spinning at plant No. 2 of the Entwistle company, who was transferred to No. 1 Mill.

✦ OSCAR G. HAMILTON has succeeded JOHN MCGREGOR as overseer of dyeing at Gordon Woolen Mills, Inc., Newport, N. H.

Obituary

William Marvin Hanes

William Marvin Hanes, 49, retired textile manufacturer and capitalist of Winston-Salem, N. C., died at his home in that city, April 23, following an illness of several years. Since 1926 he had spent much time at Saranac Lake, N. Y., until more recently when he has resided continuously in Winston-Salem.

Following his graduation from Trinity College, of Durham, now Duke University, in 1902, he returned to Winston-Salem and became associated with his father, P. H. Hanes, Sr., and his brother, P. H. Hanes, Jr., in the knitting business, which was then just starting. He served as vice-president and held active connection with the P. H. Hanes Knitting Co., until his health failed. At the time of his death, he was vice-president and chairman of the board of directors. He married March 30, 1909, Miss Nona Swank, of Johnstown, Pa. Mrs. Hanes, one daughter, and three sons, his brother P. H. Hanes, Jr., and four sisters, survive.

Henry Bascom Heath

Henry Bascom Heath, aged 58 years, of Charlotte, N. C., president of the Wadesboro (N. C.) Cotton Mills, the Manetta Mills, Monroe, N. C., and the Manetta-Jackson Mills, Lando, S. C., and largely interested in many other enterprises in Charlotte, killed himself with a revolver on April 22 at his home in Charlotte. Mr. Heath had for some time been in bad health, suffering with heart trouble, and it is thought that his condition was one of the contributing factors in his death. His widow survives him.

Dwight Seabury

Dwight Seabury, prominent mill engineer, died in Providence, R. I., last week, after a brief illness. He was 68 years old. He was born in Providence on Feb. 14, 1863, and educated in the old Providence high school and Mowry & Goff school. He entered on his career with the firm of S. P. Sheldon of Providence. Among the mills in Pawtucket designed and built under the supervision of Mr. Seabury are the plants of the Royal Weaving Co., the Jenckes Spinning Co., the Solway Dyeing & Textile Co. and the Lumb Knitting Co. He was a member of the Southern New England Textile Club, the American Society of Mechanical Engineers, the New England Manufacturers' Association, the Dixon-Spencer Associates and the To-Kalon Club of Pawtucket.

Mrs. George A. Bigelow

Mrs. Dora L. Bigelow, wife of George A. Bigelow, president of the Hopeville Mfg. Co., Inc., Worcester, Mass., died at her home in that city on April 20, in her 78th year. She was born in Norwich, Conn., and lived most of her life in Worcester and Leicester, Mass., being prominent in clubs, musical and philanthropic circles in both places. She leaves besides her husband, a son, Edward A. Bigelow, treasurer and manager of the Hopeville Mfg. Co., and three daughters.

Thomas Phipps Curtis

Thomas Phipps Curtis, long identified with the Boston woolen trade, died April 22 at his home in Newton Highlands, Mass. Mr. Curtis was born in Quincy, Mass., in 1850. He was connected with Deering, Milliken & Co. of New York for 55 years. Mr. Curtis was president of the Mayo Woolen Co., Millbury, Mass.; the Madison Woolen Co., and the Cascade Woolen Co. He became a member of the Rabboni Lodge of Masons in 1873 and 1927 was presented with a medal from the Grand Lodge as a token of 50 years in good standing. Mr. Curtis is survived by his widow, who was Miss Ellen Foster Hobbs; and one son, Lewis F. Curtis of Chestnut Hill.

Jasper A. Holmes

Jasper A. Holmes, boss dyer for the Belding-Heminway Co., Putnam, Conn., for the last 36 years, died at his home in that city on April 24, after a long illness. He was born in Newark, N. J., on Nov. 11, 1874, and went to Putnam in 1885. He leaves a widow and a daughter. Burial was in Danielson, Conn.

Robert Crayton Collins

Robert Crayton Collins, overseer spinning, Dacotah Cotton Mills, Lexington, N. C., died at his home there April 27 following an intermittent illness of several months. He was a native of Central, S. C., and was 55 years of age. Surviving are his widow and five children. He is survived also by a brother, Cliff Collins, and a sister, Mrs. R. W. Gossett, both of Greenville, S. C.

Jeremiah Goff

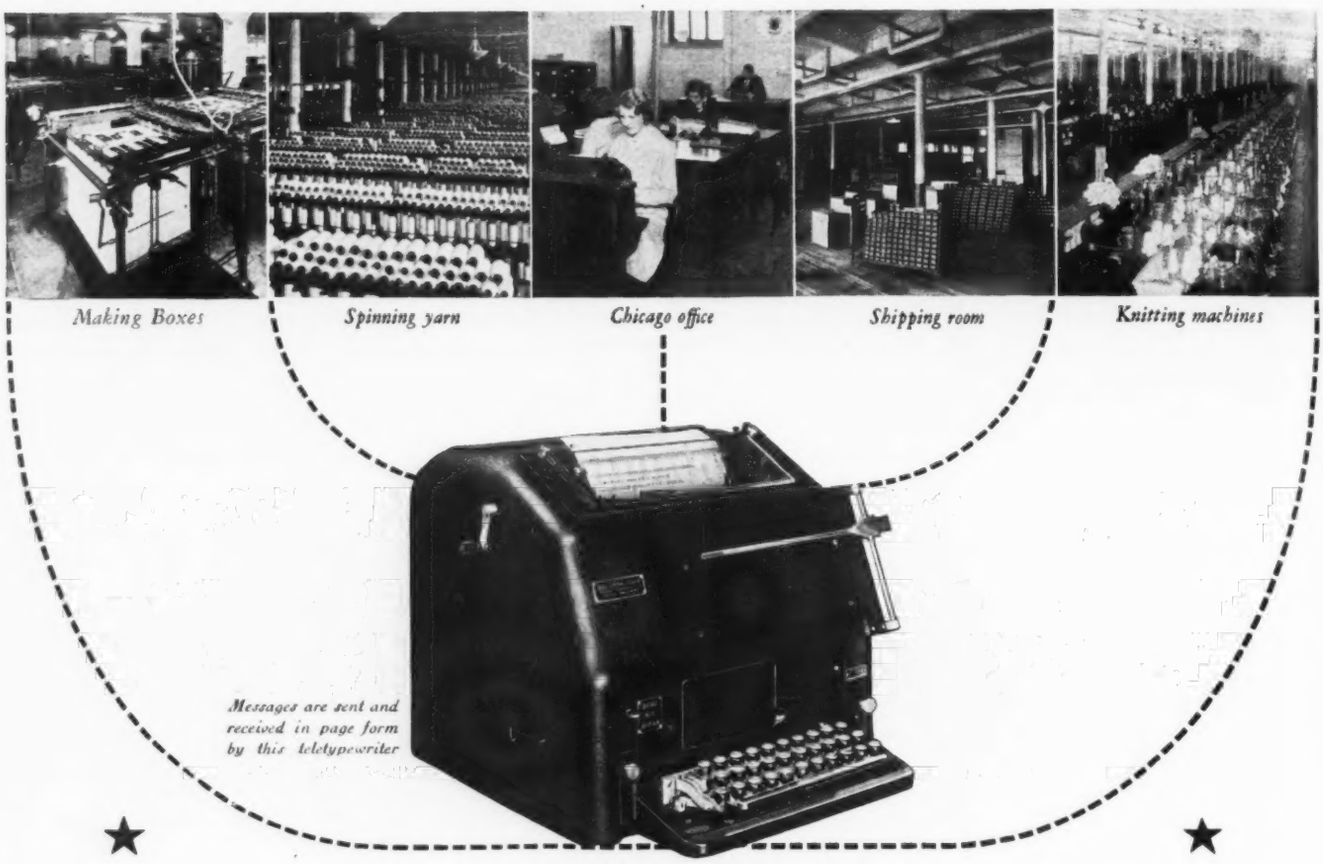
Jeremiah Goff, aged 73 years, president of the New Bedford Shuttle Co. and the Standard Ring Traveler Co., New Bedford, Mass., died at his residence in Charlotte, N. C., where he had been making his home for some time, operating a textile supply business, April 22, following a brief illness. Mrs. Goff, one niece and one nephew survive.

Thomas H. Reilly

Thomas H. Reilly, superintendent of the spinning department of the Glenside Woolen Mills, Skaneateles Falls, N. Y., for many years, died recently at his home in that town, following a lingering illness.

TELETYPEWRITER SERVICE

REGULATES PRODUCTION AT THE SEPARATED PLANTS OF THE BEAR BRAND HOSIERY COMPANY



WITH headquarters in Chicago, office in New York, and factories at Kankakee, Ill.; Bradley, Ill.; Beaver Dam and Hartford, Wis., The Bear Brand Hosiery Company needs instant and continuous contact between all manufacturing units to guarantee smooth production. This is particularly important as the factories are dependent upon each other, one making yarn, another hosiery, another labels and boxes.

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